

TABLE 55

SALINITY OBSERVATIONS MADE IN SACRAMENTO-SAN JOAQUIN RIVER DELTA DURING THE SEASON OF 1928

Samples taken by local observers approximately one and one-half hours after high tide --
Salinity expressed in parts chlorine per 100,000

Station	January														
	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30
Point Orient	1070		1170		1290		1310		1370		1240		1240		1460
Point Davis			630				650		970		990		690		234
Bull Head Point	550		206		350		502		580		520		476		252
Bay Point			114		86		138		212				7		7
O and A Ferry	7		5		6		6		17		24		7		9
Collinsville	5		6		5		8		5		6		5		5
Antioch	7		6		7		6		5		7		5		5
	February														
Point Orient	1410		1180		1060		1160		1190		1330		1360		
Point Davis			350		340		202		760		610		690		
Bull Head Point	316		174		120		202		434		348		206		
Bay Point	182		16		8		16		66		106				
O and A Ferry	3		1		2		5		4		9		4		
Collinsville	8		1		2		5		3		5		5		
Antioch	5		5		5		6		6		4		4		

TABLE 55 (CONTINUED)

SALINITY OBSERVATIONS MADE IN SACRAMENTO-SAN JOAQUIN RIVER DELTA DURING THE SEASON OF 1928

Samples taken by local observers approximately one and one-half hours after high tide -
Salinity expressed in parts chlorine per 100,000

Station	July														
	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30
Point Orient	: 1590 :	:	: *1720 :	:	: 1720 :	:	: 1830 :	:	: 1780 :	:	: 1640 :	:	: 1780 :	:	: *1870 :
Point Davis	:	:	: 1420 :	:	: 1310 :	:	: 1360 :	:	: 1310 :	:	: 1420 :	:	: 1460 :	:	: 1600 :
Bull Head Point	: 1180 :	:	: 1180 :	:	: 900 :	:	: 1180 :	:	: 1320 :	:	: 1200 :	:	: 1090 :	:	: 1190 :
Bay Point	:	:	: 690 :	:	: 700 :	:	: 790 :	:	: 850 :	:	: 860 :	:	: 850 :	:	: 950 :
O and A Ferry	: 208 :	:	: 358 :	:	: 276 :	:	: 510 :	:	: 460 :	:	: 600 :	:	: 460 :	:	: 600 :
Collinsville	: 142 :	:	: 192 :	:	: 148 :	:	: 238 :	:	: 390 :	:	: 430 :	:	: 380 :	:	: 490 :
Emmaton	: 15 :	:	: 44 :	:	: 22 :	:	: 27 :	:	: 35 :	:	: 33 :	:	: 50 :	:	: 69 :
Three Mile Slough	: 18 :	:	: 16 :	:	: 17 :	:	: 23 :	:	: 25 :	:	:	:	: 26 :	:	: *36 :
Rio Vista Bridge	:	:	:	:	:	:	:	:	: 17 :	:	: 13 :	:	: 12 :	:	: 16 :
Southwest Point	:	:	:	:	:	:	:	:	: 13 :	:	: 13 :	:	: 10 :	:	: 18 :
Camp 33 (Staten Is)	:	:	:	:	:	:	:	:	: 15 :	:	: 13 :	:	: 12 :	:	: 25 :
Antioch	: 42 :	:	: 106 :	:	: 78 :	:	: 126 :	:	: 270 :	:	: 204 :	:	: 194 :	:	: 204 :
Jersey	: 13 :	:	: 21 :	:	: 24 :	:	: 18 :	:	: 77 :	:	: 37 :	:	: 29 :	:	: 39 :
Webb Pump	:	:	: 15 :	:	: 13 :	:	: 19 :	:	: 22 :	:	: 21 :	:	: 14 :	:	: 16 :
Holland Pump	:	:	:	:	:	:	:	:	: 19 :	:	: 17 :	:	: 15 :	:	: 19 :
Central Landing	:	:	:	:	:	:	:	:	:	:	: 13 :	:	: 13 :	:	: 16 :
Palm Tract	:	:	:	:	:	:	:	:	: 16 :	:	: 15 :	:	: 12 :	:	: 13 :
Middle River	:	:	:	:	:	:	:	:	: 16 :	:	: 15 :	:	: 17 :	:	: 14 :
Mandeville Pump	:	:	:	:	:	:	:	:	:	:	: 18 :	:	: 14 :	:	: 17 :

*Taken on odd day next succeeding

TABLE 55 (CONTINUED)
 SALINITY OBSERVATIONS MADE IN SACRAMENTO-SAN JOAQUIN RIVER DELTA DURING THE SEASON OF 1928

Samples taken by local observers approximately one and one-half hours after high tide -
 Salinity expressed in parts chlorine per 100,000

Station	August														
	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30
Point Orient	1820		1730		1850		*1660		1600		1610		1630		1700
Point Davis	1610		1540				1460		1380		1320		1460		1510
Bull Head Point	1230		1310		1410		1280		950		1170		1120		1240
Bay Point	1020		1080		1170		980		970		930				1010
O and A Ferry	60C		650		630		640		690		750		690		680
Collinsville	500		560		420		520		560		470		500		560
Emmaton	83				72				142		156		154		98
Three Mile Slough	47		55		59		57		75		71		53		83
Rio Vista Bridge	19		18		31		11		17		26		24		44
Isleton Bridge							7		13		6		*7		*8
Liberty Ferry													5		5
S.W.Pt. (Staten Is)	17		17		23		10		4		6		11		10
Camp 33 (Staten Is)	15		13		14		9		4		4		8		8
Terminus (Cp. 29)							8		4		7		9		16
Antioch	272		208		398		390		440		280		330		390
Jersey	84										93		112		126
Webb Pump	33		19		19		22		29		10		35		46
Holland Pump	23		20		15		24		10		16		23		29
Central Landing	19		15		9		10		15		6		13		12
Palm Tract	20		19		15		7		10		9		12		12
Middle River	21		16		20		16		14		6		19		11
Mandeville Pump	25		16		17		10		15		11		19		14
Mansion House							10		15		15		15		12
King Is. Camp 3 1/2							9		9		10		*11		11
Rindge Pump							25		18		17		24		24

*Taken on odd day next succeeding

TABLE 55 (CONTINUED)

SALINITY OBSERVATIONS MADE IN SACRAMENTO-SAN JOAQUIN RIVER DELTA DURING THE SEASON OF 1928
 Samples taken by local observers approximately one and one-half hours after high tide -
 Salinity expressed in parts of chlorine per 100,000

Station	September														
	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30
Point Orient	1690		1660		1680		1650		1670		1640		1640		1650
Point Davis			1370		1510		1380		1540						
Bull Head Point	1130		1160		1370		1260		1240		1220		1290		1150
Bay Point	970		950		850		970		960		1050				950
O and A Ferry	680		680		630		620		610		540		580		540
Collinsville	590		500				490		530		470		410		430
Emmaton	96		82				144		108		59		55		29
Three Mile Slough	109		56		96		72		35		16		45		21
Rio Vista Bridge	28		23		24		16		7		6		9		7
Isleton Bridge	7		6		*6		7		7		3		*5		2
Liberty Ferry	6		5		4		5				5		7		6
S.W.Pt. (Staten Is)	9		6		12		15		10		17		5		10
Camp 33 (Staten Is)	8		7		6		7		10		10		9		7
Terninous (Op. 29)	6		6		8		6		8		9		7		5
Antioch	450		420		390		390		450		350		230		266
Jersey	140		192		106		136		112		98		76		60
Webb Pump	41		32		33		29		32		28		27		
Holland Pump			26		28		32		25		30		21		
Central Landing	12		14				11		10		10				
Palm Tract	11		12		15		15		14		21		14		13
Middle River	9		11		12		14		13		15		14		17
Mandeville Pump	14		17		17		16		20		18		22		12
Mansion House	16		14		11		14		13		12				
King Is. Camp 3 1/2			17				15		*13				15		13
Bridge Pump	23		21		23		21		26		12		19		28

*Taken on odd day next succeeding

TABLE 55 (CONTINUED)

SALINITY OBSERVATIONS MADE IN SACRAMENTO-SAN JOAQUIN RIVER DELTA DURING THE SEASON OF 1928

Samples taken by local observers approximately one and one-half hours after high tide -
Salinity expressed in parts chlorine per 100,000

Station	October														
	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30
Point Orient	1760		1650		1750		1680		1590		1460		1650		1650
Point Davis	1480		1390		1410		1390		1360		1290		1310		
Bull Head Point	1390		960		1110		1000		880				950		770
Bay Point	1030		830		810		790		750		690		830		850
O and A Ferry	390		460		390		400		280		360		370		280
Collinsville	390		310				270		192		146		182		116
Emmaton	36		28		25		22		11		10		9		26
Three Mile Slough	33		24		17		13		11		10		6		7
Rio Vista Bridge	9				5		3		2		2		2		2
Isleton Bridge	6				2		3		3		1		13		*2
Liberty Ferry	5						3		5		1		3		4
S.W.Pt. (Staten Is)	7				4		5		2		2		3		3
Camp 33 (Staten Is)	5				3		3		4		1		3		3
Terminous (Op.29)	7				5		5		4		5		6		4
Antioch	304		202		184		180		140		126		120		90
Jersey	67		41		40		28		29		22		17		9
Webb Pump	24		21		18		20		22		14		11		11
Holland Pump	27		25		34		22		21		16		18		17
Central Landing	6		3		7		5		7		4		4		1
Palm Tract	15		11		10		10		12		6		5		8
Middle River	16		13		13		*11		11		10		8		8
Mandeville Pump	17		19		18		17		17		14				
Mansion House	12		10		8		11		8				6		5
King Is. Camp 3 1/2					19				*14		11		12		11
Ridge Pump	18		16		14		13		10		9		8		7

*Taken on odd day next succeeding

TABLE 55 (CONTINUED)

SALINITY OBSERVATIONS MADE IN SACRAMENTO-SAN JOAQUIN RIVER DELTA DURING THE SEASON OF 1928

Samples taken by local observers approximately one and one-half hours after high tide -
Salinity expressed in parts chlorine per 100,000

Station	November														
	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30
Point Orient	1600		1580				1700		1690		1640		1680		1670
Point Davis	1260		1170		1330		1250		1050*	1270			*1130		1220
Bull Head Point	890		800		900		960		620		1000		850		920
Bay Point	790				650		700				480		730		660
C and A Ferry	260		200		300				80		120		242		208
Collinsville	138		136		142		70		32		30		144		72
Maraton	14		7		8		5		4		6		6		5
Three Mile Slough	7		8		5		7		3		3		2		3
Rio Vista Bridge	3		1												
Isleton Bridge	1		2												
S.W.Ft. (Staten Is)	9		9		8				3		5		2		2
Camp 33 (Staten Is)	5		3		2				6		3		2		2
Terminus (Cp.29)	9		8		6				12		10		7		
Antioch	126		52		36				22		22		34		28
Jersey	14		14		19				10		9		9		10
Webb Pump	10		16		9				8		10		9		6
Holland Pump	9		10		13										
Paln Tract	5		5												
Rindge Pump	8		10		11				11		9		6		12

*Taken on odd day next succeeding

TABLE 55 (CONTINUED)

SALINITY OBSERVATIONS MADE IN SACRAMENTO-SAN JOAQUIN RIVER DELTA DURING THE SEASON OF 1928

Samples taken by local observers approximately one and one-half hours after high tide -
Salinity expressed in parts chlorine per 100,000

Station	December														
	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30
Point Orient	1680		*1510		1650		1590		1570		1590				1560
Point Davis			1300		1330		1130		1120		1180		1220		1050
Bull Head Point	770		950		820		750		720		850		*1110		910
Bay Point			550						350		500		640		
O and A Ferry	106		140		158		96		38		148		72		54
Collinsville	82		57		44		38		12		14		126		13
Emmerton					4		11		2		8		5		4
Three Mile Slough	12		4		3		1		2		4		3		2
Antioch	25		32		44		30		11		10		22		10
Jersey	9		7		8		13		7				7		9
Webb Pump	12		6		6										

*Taken on odd day next succeeding

TABLE 66

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1929⁽¹⁾

Samples taken by local observers approximately one and one-half hours
after high tide.

Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	JANUARY							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo & Suisun Bays							
Point Orient	1530	1510	1590	1480	1560	1620	1660	1410
Point Davis	880	940	1040	1210	1050	1160	1040	*1010
Bullhead Point	730	*630	*580	880	960	*660	*620	*870
Bay Point	290	410	430	420	590	500	460	300
O and A Ferry	20	42	54	92	152	75	71	51
	Sacramento River Delta							
Collinsville	17	17	15	*19	16	36	38	15
Emmaton	4	6	*8	*4	4	5	*6	6
	San Joaquin River Delta							
Antioch	8	11	12	15	9	17	14	14
Jersey	5	7	5		6		*6	8
	FEBRUARY							
	San Francisco, San Pablo & Suisun Bays							
Point Orient	1410	1500	1350	1380	1390	1530	1420	
Point Davis	950	820	720	*580	760	850	760	
Bullhead Point	980	*390	400	*300	*370	*420	340	
Bay Point	460	140	60	*152	206		*160	
O and A Ferry	16	9	6	*7	9	12	*10	
	Sacramento River Delta							
Collinsville	17	8	6	8	5	9	*8	
Emmaton	6	5	4	3	3	5	4	
	San Joaquin River Delta							
Antioch	12	8	6		9	8	*10	
Jersey	10	8		10	12	7	7	

(1) See note (1) Table 65.

* Samples taken at low high tide.

TABLE 66 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1929⁽¹⁾

Samples taken by local observers approximately one and one-half hours after high high tide.

Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	MAY							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo & Suisun Bays								
Point Orient	1210	1550	1520	1540	1440	1550	1470	1560
Point Davis	590	*820	*740	800	710	*930	660	*810
Bullhead Point	*240	530	610	650	520	*340	430	710
Bay Point		*140	*108	*158	*104	*110	50	*250
O and A Ferry	*10	*17	*10	7	*6	*8	*10	*12
Sacramento River Delta								
Collinsville	*3	*4	*4	11	*5	*7	7	*5
Erraton	*4	*3	*4	3		*6	3	*8
Three Mile Sl. Br.							4	*3
Rio Vista Bridge							*5	*3
Taleton Bridge							5	*4
Liberty Ferry							8	*5
Howard Ferry								*4
Walnut Grove								*3
Paintersville Br.							4	*4
Hood Ferry							4	*2
Freeport Ferry								*4
San Joaquin River Delta								
Antioch	5	5	10	6	2	2	2	*4
Jersey								*7
Webb Pump								*5
Holland Pump								*11
Orwood Bridge (2)							10	*12
Middle River P.O.							18	*14
Mansion House								*7
Mandeville Bump								*19
Rindge Pump								*9
Williams Bridge							7	*8

(1) See note (1) Table 65.

(2) Prior to June 14th samples were taken at Palm Tract (Orwood).

* Samples taken at low high tide.

TABLE 66 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1929⁽¹⁾

Samples taken by local observers approximately one and one-half hours
after high tide

Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	JUNE								
	2	6	10	14	18	22	26	30	
San Francisco, San Pablo & Suisun Bays									
Point Orient			1610	1530	1500	1450	1390	1540	1510
Point Davis	970	*1030	*1140		940	840	780	780	
Bullhead Point	520	1020	930	770	750	620	650	570	
Bay Point	*138	*440	*400	550	410	350	250		
O and A Ferry	*38	*72	*57	65		*18		*54	
Innisfail Ferry			200	180	*150	*140	73	96	
Sacramento River Delta									
Collinsville	*4	*26	61	*28	*10	*4	8	*9	
Emmaton	*5	*4	2	*6	*4	4	4	*11	
Three Mile Sl. Br.	*3	4	2	*6	*8	*4	4	*9	
Vista Bridge	3	2	6	3	2	1	1		
Isleton Bridge	2	3	3	*4	5	4	6	9	
Liberty Ferry	*2	*15	7	*9	*9	3	5	*5	
Howard Ferry	3	*3	2		*4	*2	4	*4	
Sutter Slough	*4	*4	*3	*4	*4	*6	3	*6	
Little Holland Ferry	*4	*2	7	*3		2		*4	
Walnut Grove			3	3	3	2	3	5	
Paintersville Br.	4	4	3	4	3	5	6	5	
Hood Ferry	*5	*5	3	*2	3	3	4	*3	
Freeport Ferry		*2	3	*4		5	4	*4	
Sacramento	1	2	3	4	2	3	5	2	
Mokelumne River Delta									
S. W. Pt.	*4	*4	4	*4	*8			*5	
Camp 33	*9	*3	4	*4	*2	3		*6	
Tyler Island Ferry	*3	2	3	*7	*2	*2	3	*5	
Camp 11	*3	*7	2	4	2	3		5	
Camp 29 (Terminus)	*3	*3	3	*5	*4	3		*4	
Camp 25				*7	*2	2		*3	
New Hope Bridge	*2	*3	2	*2	*1	1		*4	
Camp 20	*7	*4	4	*9	*2	1		*2	

(1) See Note (1) Table 65.

* Samples taken at low high tide.

TABLE 66 (CONTINUED)

ALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1929⁽¹⁾

Station	JUNE (CONTINUED)							
	2	6	10	14	18	22	26	30
	San Joaquin River Delta							
Antioch	5	22	33	*16	15	12	11	14
Jersey		*9	12	7	*9	*9	11	*7
Twitchell Is. Pump		4	7	5	5	5	5	6
Webb Pump	*6	4	4	*16	6	5	8	14
Holland Pump	*12	*15	11	*15	*11	11	10	10
Central Landing	6	*5	*2	5	6	6	*6	*5
East Contra Costa I.D.			*7	8	7	7	8	7
Orwood Bridge (2)	*12	*11	10	8	8	*9	4	*10
Middle River P.O.	12	*7	5	*9	*13	11	6	*8
Mansion House	5	*7	8	*7	*7	*7	10	*7
Ward Landing			7	11	*10	10	9	11
Drexler Bridge				*7	*7	*15	8	*12
Camp 3½ (King Is.)	*10	*11	*8	8	7	3	7	*10
McLeville Pump	*12	*11	10	*13	*11	9	9	*12
Clifton Court Ferry	*5	4	5	*6	*7	9	6	*7
Rindge Pump	*11	*14	11	*12	15	15	9	13
Williams Bridge	*6	5	4	*7	8	14	9	*9
Stockton Cy. Cl.	*13	13	10		*16	8	12	*16
Stockton	*106	86	76	*76	64	67	*71	94
Mossdale Bridge	*7	*7	6	5	5	*6	12	11

1) See note (1) Table 65.

2) Prior to June 14th samples were taken at Palm Tract (Orwood).

* Samples taken at low high tide.

TABLE 66 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1929⁽¹⁾

Samples taken by local observers approximately one and one-half hours after high high tide.

Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	JULY							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo & Suisun Bays								
Point Orient	1600	1680	*1640	1660	1780	1200	1620	1640
Point Davis	*980		*1380	1160	1360	900	1320	1340
Bullhead Point	990	1030	1040	970	960	840	1180	1260
Bay Point		830	830	770	480	1020	840	1110
O and A Ferry	*74	442	370	350		*450	500	580
Innisfail Ferry	*150	*225	380	370	360	*540	460	580
Sacramento River Delta								
Collinsville	*18	*152	300	*200		*220	360	*280
Ermaton	*4		37	*14	36	*28	*77	*100
Three Mile Sl. Br.	*6	*9	19	*9	*20	36	37	100
Rio Vista Bridge	4	6	2	3	6	3	4	7
eton Bridge	6	2	7	2	3	2	3	3
Liberty Ferry	*8	2		*6	*6	14	2	
Howard Ferry	*3	*3	3	*7	*6	4	3	
Sutter Slough	*6	*9	6			6	5	4
Little Holland Fy.	*6	7	7	*9	*11	4	4	*6
Walnut Grove	6	7	3	3	8	2	3	*3
Paintersville Br.	5	7	2	3	9	6	4	4
Hood Ferry	*7	2	10	*10	7	7	4	*3
Freeport Ferry	5		8	*7	6	4	4	3
Sacramento	8	3	3	3	3	2	3	3
Mokelumne River Delta								
S.F.Pt.	*5	*7	4	*8	*6	4	*4	*4
Camp 33	*3	*6	4	*3	*8	4	*3	*4
Tyler Island Ferry	*5	4	6	*6	*6	9	*6	*4
Camp 11	*4	5	2	5	3	4	2	3
Camp 29 (Fernatous)	*4	*11	3	4	*8	5	*5	*5
Camp 25	*3	*5	3	*4	6	5	*6	*7
New Hope Bridge	*3	6	2	*1	*6	3	*2	*2
Camp 20	*4	*4	4	*5	*8	5	*5	*7

(1) See note (1) Table 65.

* Samples taken at low high tide.

TABLE 66 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1929⁽¹⁾

Station	JULY (CONTINUED)							
	2	6	10	14	18	22	26	30
San Joaquin River Delta								
Antioch	36	164	190	*100	240	260	280	370
Jersey	*7	*10	26	*12	89	*40	35	*36
Twitchell Is. Pump	9	9	9	8	13	25	17	11
Webb Pump	14	6	13	8	10			12
Holland Pump	13	15	9	10	14	15	8	12
Central Landing	7	5	6	6	*9	*4	5	*6
East Contra Costa I.D.	9	8	11	13	12	8	8	10
Orwood Bridge (2)	10	11	9	13	12	9	8	7
Middle River F.O.	*12	*11	11	*12	*11	10	*14	*9
Mansion House	*11	*7	10	*10	12	8	*14	
Ward Landing		6	9	*13	*10	8	*7	
Drexler Bridge	*12	8	12	*14	15	13	*11	*8
Camp 3½ (King Is.)	*7	*13	9	*11	10		*9	*10
Mandeville Pump	*11	10	20		13	12	*10	*9
Clifton Court Ferry	6	9	9	*9	12	14	*8	*8
Rindge Pump			15	19	21	16	20	23
Williams Bridge	8	9	8	12	12	11	9	10
Stockton Cy. Club	*20	18	19	*27		21	*26	*31
Stockton	92	80	150	150	220	120	180	100
Mossdale Bridge		10		12		16	11	11

(1) See note (1) Table 65.

* Samples taken at low high tide.

TABLE 65 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1929⁽¹⁾
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	AUGUST							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo & Suisun Bays								
Point Orient	1700	*1720	1720	1740	1720	1760	1720	1660
Point Davis	1460	*1460	1400	*1520	*1400	1600	*1480	1660
Bullhead Point	1300	1180	1320	1220	1100	1340	1240	1360
Bay Point	1100	1160	1040	*880	1040	1140	1080	1240
O and A Ferry	640	*540	660	800	720	640	820	830
Innisfail Ferry	*610	*720	740	*720	700	760	770	*780
Sacramento River Delta								
Collinsville	*390	*470	600	580		*440	*540	
Emmaton	*96	*138	198	*142	*172	*204	232	202
Three Mile Sl. Br.	*84	114	130	*126	*124	142	*88	168
Pio Vista Bridge	10	17	15	23	29	35	40	57
Skeleton Bridge	4	*3	5	7	5	6	8	13
Liberty Ferry	*6	*4	*5	*7	*6	7	4	
Howard Ferry		*4	3	*5	*4	*3	4	*4
Sutter Slough	*3	*3	11	*5	*3			
Little Holland Fy.	*4	*4	*4	*4	*4	4	*5	*4
Walnut Grove		*4	*4	4	*3	4	4	4
Paintersville Br.	4	*3	*4	*4	*7	4	4	4
Hood Ferry				*4	*5	3	4	*4
Freeport Ferry	3	6	*4	*4	3	4		3
Sacramento	3	*3	3	3	*3	3	*5	*3
Mokelumne River Delta								
S.W.Pt.	*5	7	*6	*5	7	7	*5	*5
Camp 33	*4	4		*4	4	4		*4
Tyler Island Ferry	*3	*5	*4	*3	*3	4	*4	*4
Camp 11	3	4	4	4	4	4	4	*5
Camp 29 (Terminus)	*5	5	*5	*5	3	5	*5	*5
Camp 25	*6	5	*6	*6	5	5	*6	*6
New Hope Bridge	*2	5	*4	*3	*4	5	*4	*4
Camp 20	*7	8	*7	*5	6	5	*6	*6

(1) See note (1) Table 65.

Samples taken at low high tide.

TABLE 66 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1929⁽¹⁾

Station	AUGUST (CONTINUED)								
	2	6	10	14	18	22	26	30	
	San Joaquin River Delta								
Antioch	380	*350	380	550	500	540	520	580	
Jersey	*58	*174		*104	*100	224	240	*175	
Twitchell Is. Pump	29	48	40	43	76	77	58	44	
Webb Pump	29	*16	43	45	46	56	61	80	
Holland Pump	14	17	21	27	26	31	33	39	
Central Landing	8	*8	8	8	14	*12	12	20	
East Contra Costa I.D.	10	*12	9	10	11	9	9	10	
Orwood Bridge	8	*12	9	12	10	11	12	14	
Middle River P.O.	*10	*11	*9	*12	*10	14	*11	*12	
Mansion House	*15	*9	*12	*14	*9	9	*10	*12	
Ward Landing	9	*9	*8	*11	*12	17	*14	*16	
Drexler Bridge	9	*10	*11	*10	*11	12	*10	*11	
Camp 3 $\frac{1}{2}$ (King Is.)		*8							
Mandeville Pump	*11	11	*12	11	13	13	*14	*17	
Clifton Court Ferry	11	*11	*11	*11	*23	10	*11	10	
Rindge Pump	21	*26	20	*25	22	*30	28	*22	
Williams Bridge	10	9	12	12	*9	11	*9		
Stockton Cy. Club	*32		*29	*36	*32		*32	*30	
Stockton	120	*130	160	90	*200	120	130	115	
Mossdale Bridge	*13	10	*8	*11	10	12	12	*10	

(1) See note (1) Table 65.

* Samples taken at low high tide.

TABLE 66 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1929⁽¹⁾
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	SEPTEMBER								
	2	6	10	14	18	22	26	30	
San Francisco, San Pablo & Suisun Bays									
Point Orient	1770	1760	1740	1730	1810	*1770	1830	*1750	
Point Davis	1520	1580	1460	1500	1550	1510	1540	1540	
Bullhead Point	1340	1370	1210	1200	1280	1350	1320	1220	
Bay Point			1100	1070	1080	1160	1130	1070	
O and A Ferry	720	740	750	800	630	690	700	*560	
Innisfail Ferry	840	850	850	830	870	860	844	*820	
Sacramento River Delta									
Collinsville	680	590	*510	*580	550	530	*440	*420	
Emmaton	*255	310	*180	*130	280	*165	*140		
Three Mile Sl. Br.	*160	205	*80		160	130	120	*100	
Rio Vista Bridge	67	40	49	47	21	12	15	5	
Asleton Bridge	5	6	5	4	3	3	2	*2	
Liberty Ferry	5	7	*4	*4	4	4	*3	*2	
Howard Ferry	*5	4	4	*3	3		*2	2	
Sutter Slough			O B S E R V A T I O N S						
Little Holland Ferry	4	4	*3	*3	3	3	*3	*3	
Walnut Grove	4	4	3	3	3	2	2	*3	
Paintersville Br.	3	4	3	3	3	2	2		
Hood Ferry	3	4	4	3	2	2	*2	*2	
Freeport Ferry	3								
Sacramento	3	2	2	2	3	2	1	2	
Mokelumne River Delta									
S.W.Pt.	9	*7	*4	*4	5	*5	*2	*3	
Camp 33	5	*5	*5	*4	5	*4	*3	*3	
Tyler Island Ferry	4	4	*3		3	3	*2	4	
Camp 11	5	5	5	6	6	7	6	5	
Camp 29 (Terminus)	6	*6	*6	*6	5	*5	*5	*5	
Camp 25	6	*5	*6	*7	7	*6	*6	*6	
New Hope Bridge	5	*4	*4	*5	5	*6	*6	*5	
Camp 20	6	*6	*6	*7	7	*7	*7	*8	

(1) See note (1) Table 65.

* Sample taken at low high tide.

TABLE 66 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1929⁽¹⁾

Station	SEPTEMBER (CONTINUED)							
	2	6	10	14	18	22	26	30
	San Joaquin River Delta							
: Antioch	: 555	: 550	: 510	: 500	: 480	: 490	: 420	: 440
: Jersey	: 365	: *220	: *185	: 285	: *185	: 250	: *175	: *140
: Twitchell Is. Pump	: 115	: 98	: 44	: 47	: 82	: 73	: 36	: *46
: Webb Pump	: 39	: 54	: 67	: 44	: 43	: 60	: 51	:
: Holland Pump	: 39	: 38	: 37	: 39	: 40	: 42	: 42	: 36
: Central Landing	: 19	: 16	: 10	: 20	: 14	: 9	: 10	:
: East Contra Costa I.D.	: 11	: 13	: 12	: 13	: 16	: 14	: 15	: 13
: Orwood Bridge	: 13	: 15	: 15	: 17	: 18	: 19	: 14	: 17
: Middle River P.O.	: *13	: *13	:	:	: 17	: 17	: *17	: *17
: Mansion House	: 15	: *12	: *12	:	: 16	: 15	: *15	: *14
: Ward Landing	: 19	: *18	: *19	: 21	: 22	: *22	: *23	: *22
: Drexler Bridge	: 12	: 12	: *11	: 13	: 13	: 15	: *22	: *11
: Camp 3½ (King Is.)	:	:	:	: *13	: 14	: 15	: *16	:
: Mandeville Pump	: 19	: *19	: *20	: *21	: 22	: *22	: *25	: *23
: Clifton Court Ferry	: 12	: *10	: *9	: 9	: 8	: *7	: *7	: *7
: Rindge Pump	:	: 24	: 27	: 23	: 20	: 18	: 17	: 15
: Williams Bridge	: 10	: 10	: *6	: 6	: 5	: 4	: *4	: 4
: Stockton Cy. Club.	: 29	: *29	: *23	:	: 17	:	: *15	:
: Stockton	: 105	: 125	: 130	: 90	: 100	: 115	: 105	:
: Mossdale Bridge	: 9	: *6	: *5	: 5	: 5	: *5	: *4	:

(1) See note (1) Table 65.

* Samples taken at low high tide.

TABLE 66 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1929⁽¹⁾

Samples taken by local observers approximately one and one-half hours after high high tide.

Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	OCTOBER							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo & Suisun Bays								
Point Orient	1750	1760	1740	1770	1740		1720	
Point Davis	1510	1550	1380	1430	1440	1410	1500	1400
Bullhead Point	1230	1310	1110	1060	1170	1290	1090	1120
Bay Point	970	1050		960	890	890	860	830
O and A Ferry	660	650	470	500	540	540	450	420
Innisfail Ferry	780	810		680	690	660	680	
Sacramento River Delta								
Collinsville	410	*380	*340	320	390	*245	255	210
Emmaton	110	*80	*65	60	50	69	31	21
Three Mile Sl. Br.	41	*55	31	20	20	24	16	15
Rio Vista Bridge	3	3	3	2	2	2	3	2
Skeleton Bridge	2	2	2	2	3	2	2	2
Liberty Ferry	3	2	*2	3	3	2	*2	3
Howard Ferry		2	2	2	1	2	*2	2
Sutter Slough						*2		
Little Holland Fy.	3	3	*2	3	3	2	2	2
Walnut Grove	2	2	2	2	2	2	2	3
Paintersville Br.	2	2	2	3	2	2	2	3
Hood Ferry	2	2	*2	2	2	2	2	1
Freeport Ferry						*2		
Sacramento	2	5	2	2	2	2	1	2
Mokelumne River Delta								
S.W.Pt.	*3	*3	*2	2	*3	*3	*3	
Camp 33	*3	*3	*3	3	*3	2	*3	
Tyler Island Ferry	2		*3	3	2	2	*3	2
Camp 11	6	6	6	5	6	4	5	
Camp 29 (Terminus)	*5	*4	*4	4	*4	*5	*5	
Camp 25	*6	*6	*6	6	*8	*7	*7	
New Hope Bridge	5	*5	*6	6	6	*6	*6	
Camp 20	*6	*7	*7	7	*8	7	*8	

(1) See note (1) Table 65.

* Samples taken at low high tide.

TABLE 66 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1929⁽¹⁾

Station	OCTOBER (CONTINUED)								
	2	6	10	14	18	22	26	30	
San Joaquin River Delta									
Antioch	365	410	280	230	280	290	235	191	
Jersey	170	155	95	69	59	*34	*48	60	
Twitchell Island Pp.	34	42	22	21	22	19	16	14	
Webb Pump	40	37		24	24	21		18	
Holland Pump	36	37	28	29	28	27	24	23	
Central Landing	9	10	7	7	9	*7	*7	6	
East Contra Costa I.D.	15	12	12	11	10	10	10	11	
Orwood Bridge	16	16	14	12	13	13	13	12	
Middle River P.O.	*17	13	*17	17	16	*14	*13	15	
Mansion House	12	11	*12	10	11	*11			
Ward Landing	21	*21	*21		20	18		19	
Drexler Bridge	12	11	9	9	9	11	*9	9	
Camp 3½ (King Is.)	16			16	16	*15			
Mandeville Pump	25			20	20			19	
Clifton Court Ferry	5	*5	*6	6	7	5	6	*7	
Rindge Pump		16	16	16	17	16	18	19	
Williams Bridge	7	5	*5	*6	6	6	*7	7	
Stockton Cy. Club		14	*13	16		17			
Stockton	91	86	90	88	106	86	107	92	
Mossdale Bridge	*5	*5	*7	6	6	*6	*7	7	

(1) See note (1) Table 65.

* Samples taken at low high tide.

TABLE 66 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1929⁽¹⁾
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	NOVEMBER							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo & Suisun Bays								
Point Orient	1770	1740	1620	1690	1730	1730	1760	1730
Point Davis	1330	1430	1350	1380	1510		1350	1390
Bull head Point	1140	1070	1050	1070	1250	1140	1140	1140
Bay Point	860	860		770	950	*800	840	
O and A Ferry	450	480	440	520		450	390	360
Innisfail Ferry	670	640	610	590	550	590	580	570
Sacramento River Delta								
Collinsville	240	280	270	255		285	285	430
Emmaton	54	*15	10		40	*17	23	25
Three Mile Sl. Br.	15	16	10	7	9		15	15
Rio Vista Bridge	2	2	2	2	2	3	2	3
Liberty Ferry	2	3	2	2	3	2	2	
Walnut Grove	3	2	2	2	2	3	2	2
Sacramento	2	2	2	1	2	2	2	1
Mokelumne River Delta								
New Hope Bridge	*6	*2	1	2	*2	*3	2	*2
San Joaquin River Delta								
Antioch	204	200	170	145	240	200	210	255
Jersey	80	46	20	30	63		44	55
Twitchell Island Pp.	16	14	11	11	12	12	12	13
Webb Pump	13	15	13	13	12	14	13	12
Holland Pump	22	20	18	17	18	16	15	15
Central Landing	5		3	4	4	*5	5	5
East Contra Costa I.D.	10	9	12	9	9	9	11	11
Ward Landing	17	17	17	*15	15	*15	16	
Drexler Bridge	11	9	11	8	8	*8	10	12
Rindge Pump	17	18	18	18	18	19	18	18
Stockton Cy. Club	*16	*20					18	
Stockton	105	103	98	105	71		81	90
Mossdale Bridge	*7	*7	7	8	*8	*7	8	7

(1) See note (1) Table 65.

* Sample taken at low high tide.

TABLE 66 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1929⁽¹⁾
 Samples taken by local observers approximately one and one-half hours
 after high high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	DECEMBER								
	2	6	10	14	18	22	26	30	
San Francisco, San Pablo & Suisun Bays									
Point Orient		1700	1660		1420	1430	1220	1330	
Point Davis	1360	1280	1290	1220		500	600	830	
Bullhead Point	1120	1050	1240	860	250	38	380	560	
Bay Point	890	700	920	520	32	8		221	
O and A Ferry	400		380	140	11	4	4	21	
Innisfail Ferry	610	570	560	400	140	93	64	36	
Sacramento River Delta									
Collinsville	320	*195	250	48	2	2		4	
Emmaton	33		32	5	1		2	2	
Three Mile Sl. Br.	*16	*9	8	2	1	1	3	4	
Rio Vista Bridge	2	2	2	1		1	1	1	
Liberty Ferry		2	2	3					
Walnut Grove	2		2	1	1	1	1		
Sacramento	2	2	1	1	1	1	1	1	
Mokelumne River Delta									
New Hope Bridge	*2	*2	2	*1					
San Joaquin River Delta									
Antioch	230	180	230	60	9	5	4	5	
Jersey	65	46	57		7	6		5	
Twitchell Is. Pump	12	10	*9	7	3	4	3	5	
Webb Pump	11	11	11	10					
Holland Pump	15	14	13	13	12	12	11	11	
Central Landing	*4	*4	2	2		2	2	*4	
East Contra Costa I.D.	15	12	11	10	10		11	11	
Ward Landing					13				
Drexler Bridge	11	10	9	10	9	9	8	9	
Rindge Pump	18	17	19	15	20	21	18	18	
Stockton Cy. Club		*17	17	15	*23	17	17	*17	
Stockton	122	99		59	86				
Mossdale Bridge	7	*8	8	8	10	9	8	9	

(1) See note (1) Table 65.

* Sample taken at low high tide.

TABLE 85

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1930
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	JANUARY							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo & Suisun Bays								
Point Orient	1310	1400	1220	1500	1250	1190	1210	1310
Point Davis	800	910	850	810	660	390	750	610
Bullhead Point	400	590	740	670	370	330	345	380
Bay Point	175	270	268	270	75	20	31	37
O and A Ferry	15	11	18	33	5	5	5	5
Irmisfail Ferry	62	*77	72	40	73	112	45	
Sacramento River Delta								
Collinsville	4	8	4	4	5	3	3	4
Ematon	2	2	2	2	3	2	*3	*3
Three Mile Slough Br.	3	2	2	2	3	2	2	*2
El Vista Bridge	2	2	1	2		1	2	3
Liberty Ferry				2	2	2	3	3
Walnut Grove	2	2	1	2	1	1		1
Sacramento	2	1	1	2	1	1	1	1
Mokelumne River Delta								
New Hope Bridge	*2	2	1	1	*1	1	*1	*2
San Joaquin River Delta								
Antioch	5	6	4	7		5	6	5
Jersey	6	6	5	6	8	7	7	6
Twitchell Island Pump	4	5	5	4	6	5	6	6
Webb Pump	6	8		7	12		8	8
Central Landing	*3	4	2	3	*2		3	2
Ward Landing	13	13	12	13	14	11	12	12
Holland Pump	13	12	11	12	12	14	13	13
Rindge Pump	19	20	18	15	9	11	11	10
East Contra Costa I.D.			11	11		16	*15	*15
Stockton Country Club	*18	22	15		13	5	*11	*8
Drexler Bridge	9	11	10	9	8	9	9	7
Stockton	95	*101	101	49	49	104	55	
Mossdale Bridge	*8	7	7	5	*6	6	5	4
Drainage Water Stations								
Jersey Drain	31							41
Grand Island Drain							7	8
McDonald Drain	22	22	22	24	22			
Bacon Island Drain	12	12	10	12	17	15		15
Mandeville Drain							19	20

* Samples taken at low high tide.

TABLE 85 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1930
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	FEBRUARY						
	2	6	10	14	18	22	26
San Francisco, San Pablo & Suisun Bays							
Point Orient	1340	1200	1370	1310	1370		1200
Point Davis		780	860	720	730	640	640
Bullhead Point	310	625	560	445	310	780	265
Bay Point	45		200	61	*34	243	10
O and A Ferry	6	6	5	9	4	3	2
Innisfail Ferry	104	52	33	31	31	19	65
North San Pablo Bay							
Sonoma Creek Bridge							480
Grand View							705
Vallejo							320
Lakeville							225
Cuttings Wharf							13
Napa							1
Petaluma							6
Sacramento River Delta							
Collinsville	5	4	3	*2	3	3	3
Ematon	*3	3	3	3	3	3	*1
Three Mile Slough Br.	3	2	2	3	2	2	
Rio Vista Bridge		2	1	2	1	1	
Liberty Ferry	*2	2	2	2	1	2	
Walnut Grove	1	1	1	2	1	1	
Sacramento	1	1	1	1	1	1	*1
Mokelumne River Delta							
New Hope Bridge	2	2	1	*1	2	1	*1

* Samples taken at low high tide.

TABLE 85 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1930

Samples taken by local observers approximately one and one-half hours
after high high tide.

Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	FEBRUARY (CONTINUED)						
	2	6	10	14	18	22	26
San Joaquin River Delta							
Antioch	*7	5	7	5	5	5	5
Jersey	6	8	6	8	6	6	6
Twitchell Island Pump	5	7	5	5	4	5	4
Webb Pump	9	7	7	6	6	6	5
Central Landing	2	2	3	1	1	2	
Ward Landing	11	12	10	10	10	9	11
Holland Pump	12	13	13	10	11	10	10
Rindge Pump	17	10	15	13	13	14	
East Contra Costa I. D.	17	15	15	*15	12	14	*14
Stockton Country Club	9		13	12	15		*5
Draxler Bridge	8	6	7	6	7	8	9
Stockton	102		76	81	100		91
Mossdale Bridge	4	6	9	8	8	8	7
Drainage Water Stations							
Jersey Drain	44	41	41			48	52
Grand Island Drain	7	7	9	7	8		10
Camp 35 Drain			25	17	19	16	23
McDonald Drain			22	16	21	17	23
Bacon Island Drain	16	14	13	11	11	11	13
Mandeville Drain	22	21	20	20	21	23	21
Camp 11 Drain			34	70	71	58	55

* Samples taken at low high tide.

TABLE 65 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1930
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	MARCH								
	2	6	10	14	18	22	26	30	
	San Francisco, San Pablo & Suisun Bays								
Point Orient	1080	860	1160	1210		980	1360	1260	
Point Davis	370	400	460	505		310	670	860	
Bullhead Point	140	115	105	195	7	65	330	285	
Bay Point	*6	*6	6	8	6		92	35	
O and A Ferry	2	6	4	5			3	3	
Innisfail Ferry	99	86	66	31	37		42	34	
	North San Pablo Bay								
Sonoma Creek Bridge	*240	*150	220	135	130	215	185	*270	
Grand View	630	380	395	425	360	350	515	580	
Vallejo	260	152	220	120	32	191			
McGill		4	27	71	*73	70	93	*154	
Merazo		77	52	81	*100	66	104		
Lakeville	*260	*29	85	172	*135		190		
Cuttings Wharf	33	*7	16	62	*34	14	55	260	
Napa		*2	2	*4		3	4		
Petaluma	*10	4	13	14	11	22	35	*50	
	Sacramento River Delta								
Collinsville	3	3	2	2	2	3	2	*1	
Ematon	*3	3	3	4	1	*2	2	*1	
Three Mile Slough Br.	1	2	2	1	2	2		1	
Rio Vista Bridge	1	1	2	2	2	2	1	*1	
Liberty Ferry		2	3		3	4	2	*1	
Walnut Grove	1	1	2		2	1	2	1	
Sacramento	1	1	1	*1	2	1	*1	1	
	Mokelumne River Delta								
New Hope Bridge	1	1	1	*1	1	1	1	1	

* Samples taken at low high tide.

TABLE 85 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1930
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	MARCH (CONTINUED)								
	2	6	10	14	18	22	26	30	
San Joaquin River Delta									
Antioch	4	*7	4	5	4	5	5	*4	
Jersey	5	5	5	5	5	6	5	4	
Twitchell Island Pump	4	9	4	5	4	5	3	2	
Webb Pump	7	8	7	5	6	7	6	5	
Central Landing	4	2	1	2	3	2	2	2	
Ward Landing	*10	9	7	7	8		9	*9	
Holland Pump	10	13	13	13	11	12	11	10	
Rindge Pump	7	6	8	9	9	11	12	*11	
East Contra Costa I.D.	16		19	*18	15	16	11	10	
Stockton Country Club			8	*7		12		8	
Drexler Bridge	10	10	8	9	7	6	7	9	
Stockton	86	*63	74	*104		81	75	84	
Mossdale Bridge	8	6	4		7	8	8	6	
Drainage Water Stations									
Jersey Drain	49	57	49	51	50	45	21	40	
Grand Island Drain	8	8	9	9	8	9	9	6	
Camp 35 Drain	21	24	26	21					
McDonald Drain	20	21	19	19	28	22	23	28	
Bacon Island Drain	14	15	13	14		13	13	12	
Mandeville Drain	20	20	21	22	21	22	22	19	
Camp 11 Drain	46	51	76		82	82	84	84	

*Samples taken at low high tide.

TABLE 85 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1930
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	APRIL							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1220	1220	1320	1240	1230	970	1220	1390
Point Davis	640	565	630	650	520	720	680	720
Bullhead Point	410	380	260	235	240	475	420	500
Bay Point	11	43	*14		10	*41	25	
O and A Ferry	3	3	5	4	3	6	3	3
Innisfail Ferry	*38	34	*40	27	33	*44	44	37
North San Pablo Bay								
Sonoma Creek Bridge		435	570	*700	590		*640	*480
Grand View	400	615	*765	*660	*800	790	*725	*810
allejo	470	345	*360		290	480	370	
McGill	*117	293	*350	*335			*280	*400
Merazo			*340					
Lakeville	*250		*300	*350	*380	*415	*420	*470
Cuttings Wharf	*201	172	*280	*310	*220	*170	*240	*270
Napa	*3		*6	*5	*6	*6		*8
Petaluma	*63	74	*130	*111	160	*180	*185	*225
Sacramento River Delta								
Collinsville	3	3	*1	*4	3	*3	2	3
Emmaton	2	2	2	Empty		*2	2	*2
Three Mile Slough Br.	2	2	*1	*1	1	2	1	*2
Rio Vista Bridge	2	2	2	1	1	2	2	1
Liberty Ferry	2	3	2	*2	2	*2	*1	*2
Walnut Grove	1	3	1	1	1		1	
Sacramento	1		1	1	1	1	1	1
Mokelumne River Delta								
New Hope Bridge	1	1						

* Samples taken at low high tide.

TABLE 85 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1930
 Samples taken by local observers approximately one and one-half hours
 after high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	APRIL (CONTINUED)							
	2	6	10	14	18	22	26	30
San Joaquin River Delta								
Antioch	3	4	*5	*5	5	*4	*3	*4
Jersey	4	6	*4	5	5	6	*5	4
Twitchell Island Pump	2	4	*3	3	5	4	4	*3
Webb Pump	6	7	5	6	6	7	5	*5
Central Landing	2	4	2	3	4	*4	*2	*1
Ward Landing	8	8	8	*8	*8		*9	6
Holland Pump	9	11	9	9	10	9	8	8
Rindge Pump		10	*14	9	9	13	9	*6
East Contra Costa I.D.	9	11	*9	10	10	*9	*8	
Stockton Country Club	10	15	*13	7	9			11
Drexler Bridge	8	8	7	8	7	7	5	*4
Stockton	88	108	*103	100	104	89	102	*11
Mossdale Bridge	5	7	3	4	6	*5	*3	
Drainage Water Stations								
Jersey Drain	40	40	27	46	40	34	31	31
Grand Island Drain	9	8	7	9	9	7	7	7
Camp 35 Drain	22	19		17	17	16	17	
McDonald Drain	17	15	18	15	16	11	12	
Bacon Island Drain	15	11	11	9	9	9	7	7
Mandeville Drain	19	21	20	21	22	22	21	19
Camp 11 Drain	81	94	91	62	56	53	31	16

* Samples taken at low high tide.

TABLE 85 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1930
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	MAY							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient		1290	1360	1350	1440	1330	1270	1540
Point Davis	550	750	820	700	530	590	910	960
Fullhead Point	525	360	480	400	430	545	730	750
Bay Point		28	*55	*49	81		*177	*125
Land A Ferry	3	3	3	5	6	4	15	13
Innisfail Ferry	*34	*32	*30	32	29	24		*42
North San Pablo Bay								
Sonoma Creek Bridge	*690	*530	*700	*720	*700	880		*820
Grand View	*730	840	*900		*990	*880	*960	*930
Vallejo	415	400	410					
Point	*420	*380					*470	
Lakeville	*550		*570	*560	*620	*630		
Cuttings Wharf	*315	740	*360	*350	*380	*310	*330	
Sapa	*7	7	*7	*9		11		
Petaluma	265	*300	*300	*360	420	*430	*450	*510
Sacramento River Delta								
Jollinsville	3	*3	*3	*2	2	*4	3	*5
Emmaton	2	3	2	3	*3	*3	*2	2
Three Mile Slough Br.	*2	*3	2	2	*2	*2	*2	2
Rio Vista Bridge		1	2		2	2	4	2
Liberty Ferry	2	*1	2	*1	2	*2	2	2
Walnut Grove	2	1	1	2	2	1	3	2
Sacramento	1	*1	*1	1	1	*2	1	1
Mokelumne River Delta								
New Hope Bridge		*1	*1	1	1	1	2	*2

* Samples taken at low high tide.

TABLE 85 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1930
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	MAY (CONTINUED)							
	2	6	10	14	18	22	26	30
San Joaquin River Delta								
Antioch	3	*4	*4	4	4	*5	*4	7
Jersey	4	*4	*6	*4	5	5	*5	4
Twitchell Island Pump	3	*3	*3	3	3	4	Empty	4
Webb Pump	5	*4	5	5	4	5	4	4
Central Landing	3	*2	*2	*3	3	*2	*2	3
Ward Landing		*6		5	5	7	*9	*9
Holland Pump	8	*6	6	7	7	7	6	7
Rindge Pump	8	*12	12	13	12	*13	9	7
East Contra Costa I.D.	4	*5	*6	5	6	*8	*7	
Stockton Country Club	8	*15	13			*11	9	7
Drexler Bridge	6	5	5	6	5	6	6	6
Stockton	120	91		80	68	74		
Mossdale Bridge	3	*5	*5	5	7	*4	*4	4
Drainage Water Stations								
Jersey Drain	32	24	19	32	40	26	23	24
Grand Island Drain	6	6	7		4	6	6	6
Camp 35 Drain	13	12	15	8	5	7	6	6
McDonald Drain	8	14	9	12	13	14	13	9
Bacon Island Drain	8	8	6	7	7	8	9	8
Mandeville Drain	20	19	19	19	17	18	18	16
Camp 11 Drain		44	17	12	49	25	36	27

*Samples taken at low high tide.

TABLE 85 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1930
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	JUNE							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo & Suisun Bays								
Point Orient	1380	1440	1520	1470	1390	1480	1550	1510
Point Davis	690	940		1080		1180	1150	1120
Bullhead Point	510	800	690	630	820	900	960	860
Bay Point	200	*155	*250	*350	*260	*335		*460
O and A Ferry	9	13	82	65	89	137	185	215
Innisfail Ferry	42	40	47	*77	65	*70	*119	172
North San Pablo Bay								
Sonoma Creek Bridge	980	920	*900	*860	*940	970		
and View	*960	1000	*1000	*890	1010	1020	*1100	*1140
Vallejo	530			640	700	820		880
McGill				*540		*700		*740
Lakeville		*810	*810		940	*960		1060
Cuttings Wharf	*530	*540	*550	*500	*550	640	*590	*620
Napa	*23	49	56		*83	117	195	*180
Petaluma		*570	*620	670	*700	*730	*760	860
Sacramento River Delta								
Collinsville	4	*4	*9	36	*9	*12	*41	94
Emmaton	3	*3	4	4	4		*5	5
Three Mile Slough Br.	2	3	*4	3	5	4	4	5
Rio Vista Bridge	2	4	3	2	4	3	6	3
Liberty Ferry	2	*3		2	*2			3
Walnut Grove	2		2	1	3	3		3
Sacramento	1	1	1		1	2	1	2
Mokelumne River Delta								
New Hope Bridge	1	*1	*1	1	*1	*1	1	1

* Samples taken at low high tide.

TABLE 85 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1930
 Samples taken by local observers approximately one and one-half hours
 after high high tide.

Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	JUNE (CONTINUED)							
	2	6	10	14	18	22	26	30
San Joaquin River Delta								
Antioch	5	*5	*6	13	9	*7	*15	43
Jersey	5		4	*4	*6	*6	*5	10
Twitchell Island Pump	4	5	4	4	*6	*5	6	5
Webb Pump	5	6	5	4	5	6	5	6
Central Landing	3	*4	*2	2	*3	*3	*4	4
Ward Landing	7	*7	*7	6	*8	*7	*7	*8
Holland Pump	8	7	7	7		5	6	7
Rindge Pump	10	13	9	6	*5	*6	9	10
East Contra Costa I.D.		*7	*6	*6	*6	*6	4	
Stockton Country Club	11	*15	7	6		*9		12
Brexler Bridge	6	6	6	6	*4	7	5	4
Stockton	111	79	82	93	117	108	97	
Mossdale Bridge	6	*5		2	3	3	4	7
Drainage Water Stations								
Jersey Drain	18		17	17	17	26	19	17
Grand Island Drain	5	6	6	5	7	7	5	7
Camp 35 Drain	4	6						
McDonald Drain	11	11	13	12	9	9	10	
Bacon Island Drain	7	8	8	8	7	8	6	7
Mandeville Drain	16	14	11	10	9	9	8	9
Camp 11 Drain	48	52	30	18	19	43	30	

*Samples taken at low high tide.

TABLE 85 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1930
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	JULY							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo & Suisun Bays								
Point Orient	1620		1550	1640	1640	1600	1650	1740
Point Davis	1220	1330	1270	1160	1190	1390	1410	1450
Bullhead Point	940	1000	870	880	940	1190	1260	1100
Bay Point	640	*560	*560	*620	*640	*790		*780
O and A Ferry	220	325	340	320	540	620	590	540
Innisfail Ferry		*190	*300	300	390	*465		560
North San Pablo Bay								
Sonoma Creek Bridge	1050	1045	*1090	1130	1200	1210	*1180	1340
Grand View	1170	1120	*1200	*1220	1200	*1170	*1240	1320
Vallejo	840	950	930		1060	1090	1150	1130
McGill	1010	*1030		*1020	*1200			
Gerazo			*920					
Lakeville	1050	1060	*1100		1160	*1180	*1240	*1300
Cuttings Wharf	700	*740	*800	*790	860	940	*1020	1120
Napa	240		225	*285	320	375		*370
Petaluma	860	*890	*890	950	*990	*1030	*1100	*1000
Sacramento River Delta								
Collinsville	*74	*101	99	*136	*180	*230	*500	*330
Emmaton			*12	20		*36	*80	74
Three Mile Slough Br.	6	*8	11	9	*10	*35	*42	*36
Rio Vista Bridge	3	4	4	4	5	6	5	7
Junction Point					*6	*6	*5	6
Liberty Ferry	*3	*4		5	*5	*5	*6	*6
Isleton Bridge					5	5	4	5
Walnut Grove	4	4	4	4		6	6	6
Sacramento	*3	4	4	4	*4	4	4	*4
Mokelumne River Delta								
Southwest Point					*7	*7	*5	*9
Camp 33					*5	*6	*5	*7
Tyler Island Ferry					6	*6	5	9
New Hope Bridge	*1	*1	2	2	*1	*1	1	*1

* Samples taken at low high tide.

TABLE 85 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1930
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	JULY (CONTINUED)							
	2	6	10	14	18	22	26	30
San Joaquin River Delta								
Antioch	*34	*48	*77	126	*85	*168	*240	305
Jersey	*8	*8	*15	*25	*13	*29	33	62
Twitchell Is. Pump	*6	*6	8	7	*8	24	24	*12
Webb Pump	6	7	5	6	8	15	15	13
Central Landing	*5	*6	*4	5	*8	*5	*6	*9
Ward Landing	*7	*8	*8	7	*8	*8		8
Holland Pump	*6	*7	6	6	*7	*7	9	*9
Mandeville Pump					*8	*7	6	*9
Rindge Pump	*13	*14	11	11	*13	*11	13	*12
Crwood Bridge					7	6	6	7
East Contra Costa I.D.	*6	*5	4	5		*7	7	*7
Middle River P. O.						*8	*7	*8
Mansion House							*6	
Stockton Country Club			13		*13		14	
Drexler Bridge	*5	*5	5	4	*6	7	6	*6
Stockton	87	62	*84	*79	85	*82	94	99
Mossdale Bridge	*5	*7	*6	*7	*8	8	6	10
Drainage Water Stations								
Jersey Drain	17	20	18	26	22	23	29	38
Grand Island Drain	8	10	6	7	8	7	11	
Camp 35 Drain						8		10
McDonald Drain	10	9	11	11	12	11	10	11
Bacon Island Drain	7	7	6	6	7	7	6	8
Mandeville Drain			8	6	8	7	6	8
Camp 11 Drain	18	9	9	8	7	7	9	11

* Samples taken at low high tide.

TABLE 65 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1930
 Samples taken by local observers approximately one and one-half hours
 after high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	AUGUST							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo & Suisun Bays								
Point Orient	1660	1680	1640	1630	1680	1710	1710	1750
Point Davis		1340	1420	1390	1510	1540	*1560	1580
Bullhead Point	1260	1290	1160	1160	1280	1360	1140	1340
Bay Point	*870	*820	*840	950	*850	*950	*1000	*980
O and A Ferry	630	625	610	800	750	660	680	780
Innisfail Ferry	*530	*560	*580	650	700	*720	660	810
North San Pablo Bay								
Sonoma Creek Bridge	1320	1320	1370	1420	1480	*1470	*1500	
Grand View	*1200	*1320	*1400	1420	1480	1500	*1430	1540
Vallejo	1150	1230	1170		1250	1240	1270	1320
McGill	1260							
Lakeville	*1240	*1320	1320	1330		1340		1520
Cuttings Wharf	1040	*1010	*940	1060	1050	*1050	*1210	1160
Napa	485	510	525			620		690
Petaluma	*1180	*1120	*1120	*1150	*1200	*1240	*1270	
Sacramento River Delta								
Collinsville	340	*400	*360	*450	*400	*460	500	*500
Emmaton		*120	*151	*225	*175	*168	*214	
Three Mile Slough Br.	44	62	*52	78	148	139	92	150
Rio Vista Bridge	10	10	7	9	32	52	36	
Junction Point		*5	6	6	*8	*10	*10	*10
Liberty Ferry		*4	6	*6	*5	*6	5	*6
Isleton Bridge	6	6	6	6	7	10	4	8
Walnut Grove		5	5	5	5	6	*5	4
Sacramento	*5	.5	3		4	4	4	*2
Mokelumne River Delta								
Southwest Point	*6	*5	5	*6	*9	*6	7	5
Camp 35	*5	*5	4	*5	*5	*4	4	*5
Tyler Island Ferry	7	*6	4	6	*4		4	*6
New Hope Bridge	*1	*1	1	*1	*1	*1	1	

*Samples taken at low high tide.

TABLE 85 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1930
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	AUGUST (CONTINUED)								
	2	6	10	14	18	22	26	30	
San Joaquin River Delta									
Antioch	*230	*315	420	435	*315	*380	460	315	
Jersey	*45	*75	94	120	*97	*135	220	*120	
Twitchell Island Pump	*18	*24	46	*23	*23	*56	50		
Webb Pump	18	26	30	34	41	58	47	61	
Central Landing	*6		*7	*11	*10	*12	*9	*11	
Ward Landing	*8	*9	*7	*9	*10	*11	12	13	
Holland Pump	*12	14	13	*12	*12	22	23	*16	
Mandeville Pump	*8	*8		*7	*9	10	13	*11	
Rindge Pump	*16	12	10	*14	*14	15	13	*15	
Orwood Bridge	7	7	6	8	8	8	7	10	
East Contra Costa I.D.	*9	*9	7		*8	*5	6	*9	
Middle River P.O.	*11	*7	6	9	*8	*7	*8	10	
Mansion House		7	7	*8	*8	*8	*7	*9	
Stockton Country Club	*17	18	16	*17	*17	*15		*15	
Drexler Bridge	*5	7	6	*7	*7	6	7	7	
Stockton	100	81	83		88	85	95	94	
Mossdale Bridge	*10	9	5	*6	*5	6			
Drainage Water Stations									
Jersey Drain	31	40	36	33	49	78	52	66	
Grand Island Drain	6	6		8	7		5	6	
Camp 35 Drain	7		6		6	7	8		
McDonald Drain	10	10							
Bacon Island Drain	7	8	7	9	9	9	8	11	
Mandeville Drain	7	8	7	8	10	10	13	15	
Camp 11 Drain	8	19	9	7	20	10	7	10	

*Samples taken at low high tide.

TABLE 85 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1930
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	SEPTEMBER							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1750	1750	1780	1690	1770	1730	1680	1750
Point Davis	1510	1460	1560	1500	1550	1620	1480	
Bullhead Point	1360	1380	1320	1170	1300	1290	1240	1140
Bay Point		*1060	*1030	*940	*940	990	980	770
O and A Ferry	800	690	650	640	750		540	*560
Innisfail Ferry	*790	*780	790	800	*770	810	660	700
North San Pablo Bay								
Sonoma Creek Bridge	1540	*1580	1630	1600	*1560	*1540	1670	
Grand View	1570	*1550	1610	1580	*1590		1600	1560
Allejo		*1320	1340	1330	1300	1230	1260	
McGill					*1490			
Merazo					*1410			
Lakeville	*1530	*1500	*1510		1610	*1690	1670	*1680
Cuttings Wharf	*1190	*1240	1270	1240	*1320	1290	1240	1320
Napa	*620				800	840		900
Petaluma	*1360	*1360	1350	*1380	*1450		*1480	*1470
Sacramento River Delta								
Collinsville	*570	*530	550	*450		365	320	*245
Ematon	*146		*250	200		80		*17
Three Mile Slough Br.	*105	115	*150	*70	51	31	24	18
Rio Vista Bridge	20	12	19	10	9	4	6	5
Junction Point	*10	*8	*7	*5	*6	*3	4	*4
Liberty Ferry	*6	*5	5	*4	*5	3		
Isleton Bridge	7	5	5	4	3	3	3	2
Walnut Grove		3	6	4	5			3
Sacramento	4	3	*3	*3			*3	*2
Mokelumne River Delta								
Southwest Point	*6	*5	*6	*7	*7	*4	*4	*3
Camp 33	6	*5	*5	*7	*5	4	*4	*4
Tyler Island Ferry	6	*4	4	7	*4	3	4	*3
New Hope Bridge	*1	1	1	1		1	*1	1

*Samples taken at low high tide.

TABLE 85 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1930
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	SEPTEMBER (CONTINUED)							
	2	6	10	14	18	22	26	30
San Joaquin River Delta								
Antioch	*400	*400	435	470	*280	310	315	240
Jersey	160	*150	160		*130	100	105	*57
Twitchell Island Pump	*42	72	37	43	*30	*28	27	*14
Webb Pump	60	47	44	41	34	27	26	*18
Central Landing	*14	*15	11	*10	*8	10	*6	*7
Ward Landing	15	*13	*13	16	*16	14	16	*13
Holland Pump	*22	*22	18	*19	*20	20	23	
McDonald Pump							*15	*14
Mandeville Pump	*14	14	*15	*17	*16	*15	*17	*17
Rindge Pump	*14	13	*14	*16	*14	*14	*11	*11
Orwood Bridge	11	11	11		12	11	11	
East Contra Costa I.D.	*9	*8	*10	*11	10	9	9	*9
Middle River P.O.	*10		*10	*13	*11	10	12	*12
Mansion House	*9	*8	*9	*11	*8	*8	*8	*8
Stockton Country Club	15		*10	*14		*9	*13	*10
Drexler Bridge	*8	7	*9	10	*8	6	8	7
Stockton	83		99	80	82		71	75
Mossdale Bridge	5	4	7	*7	5	6	7	*5
Drainage Water Stations								
Jersey Drain		40	37		35		33	33
Grand Island Drain	6	6	7	9	9	6	7	6
Camp 35 Drain						7	8	8
McDonald Drain						16	17	
Bacon Island Drain	12	11	14	15	12		13	12
Mandeville Drain	16	16	19	21	19	17	18	18
Camp 11 Drain	14	19	24	39	27		31	31

* Samples taken at low high tide.

TABLE 35 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1930
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	OCTOBER							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1700	1730	1890	1660	1520	1660	1580	1260
Point Davis	1310	*1430	1500		1380	1320	1250	
Bullhead Point	1090	1100	1180	1120	980	960	1050	980
Bay Point	790	770	860	*550	740	700	650	
O and A Ferry	400	350	560	340	305	330	240	310
Innisfail Ferry	690	630	600	520	520		480	480
North San Pablo Bay								
Sonoma Creek Bridge	*1520	1500	*1510	1390	*1380	*1360	1380	1260
Grand View	*1600	1560	1490	1490	1520	1500	1520	1450
Vallejo	*1160	1140	1200	1120	1080	1060	1060	1000
Gill	*1420	1390	1450	1320		1300		*1200
Merazo		1270	1320				1210	
Lakeville		1660	1520	*1640		1670	*1690	1680
Cuttings Wharf	*1280	1290	1200	1180	1180	1160	1140	1170
Napa		875			900	860		850
Petaluma	*1500	1480	1520	*1330	1400	1480	*1530	1580
Sacramento River Delta								
Collinsville	*250	230	265	140	160	250	155	120
Ermaton	*14	*20	10	*5	*11	11	8	*4
Three Mile Slough Br.	11	10	11	7	7	6	*6	*3
Rio Vista Bridge	2	3	3	2	2	2	3	1
Junction Point	*2	1	3	2	1	1	2	3
Liberty Ferry	2	5	3	*2	1		2	2
Isleton Bridge	2	2	2	2	1	1	2	1
Walnut Grove	3	2	2		*3	2		2
Sacramento	1			*1	1	3	*2	1
Mokelumne River Delta								
Southwest Point	*3	*3	*2	*1	1	2	*2	2
Camp 33	*3	*2	*3	*2	2	2	*2	2
Tyler Island Ferry	*2	1	3	2	2	2	4	1
New Hope Bridge	1	1	*1	*1	1	1	*1	1

*Samples taken at low high tide

TABLE 85 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1930
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	OCTOBER (CONTINUED)								
	2	6	10	14	18	22	26	30	
San Joaquin River Delta									
Antioch	*225	200	225	180	140	110	150	85	
Jersey	48	43	50	44	20		27	10	
Twitchell Island Pump	*14	15	12	11	7	8	8	8	
Webb Pump	14	14	14	11	8	12	9	8	
Central Landing	*6	6	5	*5	2	6	*3	3	
Ward Landing	*13	13	*12	12	11	12	12	9	
Holland Pump	*8	16	17	*15	15	15	13	10	
McDonald Pump	*13	13	13			12	12	11	
Mandeville Pump	*14	13	*11	*12	12	12	*12	10	
Rindge Pump	*10	12	14	*13	11	10	*14	13	
Orwood Bridge	10	8	8	9	7	8	8	7	
East Contra Costa I.D.		7	*8	*9	7	11	*12	11	
Middle River P.O.	11	10	*9	*9	13	9	*9	7	
Mansion House	*8	*7	*8		8		*9		
Stockton Country Club				*14			*10		
Drexler Bridge	6	6	6	*6	4	7	9	6	
Stockton		62	*67	81	72	84	68	88	
Mossdale Bridge	6	*6	*7	*8	5	6	*8	6	
Drainage Water Stations									
Jersey Drain	28	27	26	30	29		42	37	
Grand Island Drain	6	5	5	9	5	7	7		
Camp 35 Drain	9	8	7	6	6	5	6	8	
McDonald Drain	17	14	18	17	17	16	17		
Bacon Island Drain	12	11	14	13	8	12	12	10	
Mandeville Drain	17	18	16	19	18	18	17	18	
Camp 11 Drain	23	15	27	24	16		8	11	

* Samples taken at low high tide.

TABLE 85 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1930
 Samples taken by local observers approximately one and one-half hours
 after high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	NOVEMBER							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1660	1640	1710	1630	1730	1660	1570	1460
Point Davis	1320	1280	1240	1300	*1220	1210	1220	1220
Bullhead Point	1080	1070	*920	860	940	970	860	1080
Bay Point	:	:	750	*690	*540	550	530	640
O and A Ferry	340	260	360	250	225	230	205	300
Innisfail Ferry	470	480	475	490	460	415	405	420
North San Pablo Bay								
Sonoma Creek Bridge	1300	1300	*1280	*1260	*1120	*1170	*1160	:
Grand View	1500	1470	1480	1420	1360	1420	1440	1370
Tallejo	1080	1130	:	:	:	:	880	1020
McGill	:	:	1180	:	1100	1060	:	:
Merazo	1140	1150	:	:	:	1030	:	:
Lakeville	1660	:	*1700	1700	1620	:	1670	:
Cuttings Wharf	1090	1100	1160	1090	1020	1050	*1020	960
Napa	:	:	830	760	:	760	710	:
Petaluma	1500	1540	*1550	1540	1500	1500	1470	1440
Sacramento River Delta								
Collinsville	100	:	*180	160	220	*80	60	86
Emmaton	:	:	*3	:	4	2	2	*3
Three Mile Slough Br.	3	11	*6	3	*2	4	3	1
Rio Vista Bridge	2	1	3	:	:	:	:	:
Junction Point	1	2	2	:	:	:	:	:
Liberty Ferry	1	2	2	2	:	:	:	:
Isleton Bridge	1	2	:	:	:	:	:	:
Walnut Grove	1	:	2	1	:	:	:	:
Sacramento	1	1	*1	1	1	*3	1	1
Mokelumne River Delta								
Southwest Point	2	2	*2	1	:	:	:	:
Camp 33	1	2	*2	2	:	:	:	:
Tyler Island Ferry	1	2	:	:	:	:	:	:
New Hope Bridge	1	1	*1	:	:	:	:	:

* Samples taken at low high tide.

TABLE 85 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1930
 Samples taken by local observers approximately one and one-half hours
 after high high tide.

Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	NOVEMBER (CONTINUED)							
	2	6	10	14	18	22	26	30
San Joaquin River Delta								
Antioch	140	133	120	89	78	52	30	36
Jersey		20	*10	13	14		9	7
Twitchell Island Pump	7	8	*7	7	8	7	5	
Webb Pump	7	8	9	7	8	7	6	5
Central Landing	4	5	4	4	5	*4	4	
Ward Landing	12	11	*11	10	9	10	11	10
Holland Pump	10	11	11	8	9	12	9	9
McDonald Pump	10	11	*12	13	13	13	11	11
Mandeville Pump	11		*10	13	10	*10	9	9
Widge Pump	13	11	*13	11	12	11	11	10
Orwood Bridge	7	8	8	7	8	9	8	7
East Contra Costa I.D.		13	*12	13		*13	17	
Middle River P. O.	7	10	10	11	10	11	9	9
Mansion House	8	7	*8	8	*8	*9		
Stockton Country Club						*10	10	
Drexler Bridge	8	8	9	7	6	8	6	11
Stockton	90	77	68		82	82		
Mossdale Bridge	7	8	*8	8	7	*7	7	6
Drainage Water Stations								
Jersey Drain		29	26	45	43		26	41
Grand Island Drain	8	7	6	5	5	6	6	6
Camp 35 Drain	8	8	7	5				
McDonald Drain	16	18	15	22	16	18	18	16
Bacon Island Drain	9	12	11	10	11	11	9	9
Mandeville Drain	15		16	17	16	17	16	15
Camp 11 Drain	10	6	8		7	13	15	

*Samples taken at low high tide.

TABLE 85 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1930

Samples taken by local observers approximately one and one-half hours
after high high tide.

Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	DECEMBER							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1540	1710	1600	1600	1670	1690	1600	1560
Point Davis	1280	1230	1240	1260	1120	1240	1140	1270
Bullhead Point	1020	1060	990	980	1040	920	900	980
Bay Point	750		*560	600	*600	560	640	720
O and A Ferry		280	160	320	230	250	190	440
Innisfail Ferry	380	410	390	420	400	350	350	
North San Pablo Bay								
Sonoma Creek Bridge	*1140	1180	*1110	*1040	*1070	*1090	1090	1100
Grand View	1410	1400	1340	1280	1360	1410	1300	1280
Vallejo	1060	1030	1000		970	920	980	
McGill	1070				1020			
Lakeville	1530		1570	1620	1500		1600	
Cuttings Wharf	980	1040	1020	1000	1030	*1000	1000	970
Napa	720	740	740	700		670		
Petaluma	1500	1450	*1510	1500	1540	*1560	1510	1480
Sacramento River Delta								
Collinsville	78	148	*105	104	102	90	69	125
Emmaton	2	3		2	3	*3		
Three Mile Slough Br.	2	*1	2	1	3	2	3	
Sacramento	*1	*1	*1	1	*1	*1		1

*Samples taken at low high tide.

TABLE 85 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1930
 Samples taken by local observers approximately one and one-half hours
 after high high tide.

Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	DECEMBER (CONTINUED)							
	2	6	10	14	18	22	26	30
San Joaquin River Delta								
Antioch	36	92	54	50	69	52	37	45
Jersey	7	16	11	7	14	11		7
Webb Pump	5	7	8	7	7	7	7	6
Central Landing	5	*3	*4	2	3	*3	*6	*5
Ward Landing	9	*9	*11	10	12	12	11	9
Holland Pump	9	12	11	8	9	10	11	9
McDonald Pump	11							
Mandeville Pump	9	10	*10	8	11	*10		*8
Rindge Pump	10	12	*11	8	10	10	9	9
Orwood Bridge	7	8	9		8	8	7	7
East Contra Costa I.D.	13	*14		12	14	*14	11	
Middle River P.O.	8	10	*8	9	10	8	8	8
Mansion House	*9	*8	*8	8	7	*9	6	
Stockton Country Club	11		9			10		
Drexler Bridge	8	8	9	7	6	7	7	9
Stockton	66	60	68			57		
Mossdale Bridge	3	7	*6	4	6	*7	7	9
Drainage Water Stations								
Jersey Drain	31	32	26	27	28	29		33
Grand Island Drain	5	6	5	7	6	5		5
Camp 35 Drain					8	8	11	5
Bacon Island Drain	10	11	10	10	16	10	11	9
Mandeville Drain	16	17	17	15	17	16		14
Camp 11 Drain	9	10	7	8				

*Samples taken at low high tide.

TABLE 90

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1931
 Samples taken by local observers approximately one and one-half hours
 after high high tide.

Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	JANUARY								
	2	6	10	14	18	22	26	30	
San Francisco, San Pablo & Suisun Bays									
Point Orient	:ab1540:	1640:	1520:	1540:	1420:	1400:	1380:	1410:	
Point Davis	:	1250:	1150:	1080:	940:	1100:	1020:a	810:	1020:
Bulls Head Point	:	1150:	910:	790:	900:	680:	660:	700:	850:
Bay Point	:	920:	650:a	320:	540:		:ab 435:	325:	
O and A Ferry	:	162:	185:a	95:	118:	116:	97:	87:	61:
Innisfail Ferry	:	440:b	390:	345:	270:	180:b	300:	275:	155:
North San Pablo Bay									
Sonoma Creek Bridge	:	1040:a	920:ab	760:ab	850:a	770:b	640:	500:	830:
Grandview	:	1230:	1250:	1200:	1170:	1160:	1080:	1050:	960:
Vallejo	:	980:	930:a	820:			800:	750:	800:
Lakeville	:	1380:	1330:	1190:	1160:		:a 1130:	870:	960:
Cuttings Wharf	:	900:	720:	580:	680:	730:a	720:	260:	390:
Napa	:	150:	:a	15:	74:		2:		
Petaluma	:	1080:	910:	520:	590:	690:a	640:	80:	230:
Sacramento River Delta									
Collinsville	:	215:	126:	30:	33:	34:a	29:	8:	9:
Emmaton	:	:	:	:	1:	2:	3:	2:	2:
Sacramento	:ab	1:a	1:	2:ab	2:a	5:a	2:	1:	2:
San Joaquin River Delta									
Antioch	:	135:	68:a	21:ab	13:	20:	14:	9:	6:
Jersey	:	19:	6:	6:	7:	8:	6:	7:	6:
Webb Pump	:	6:	6:	5:	6:	6:	7:	6:	5:
Central Landing	:	3:	3:a	4:	2:a	4:a	2:	2:	
Holland Pump	:	7:	9:	10:	11:	10:	10:	11:	8:
Mandeville Pump	:	7:a	7:	8:	8:	9:a	9:	10:	10:
Hindge Pump	:	9:	11:	13:	13:	12:a	14:	11:	12:
East Contra Costa I.D.	:	:a	10:	12:	12:a	13:a	13:a	15:	
Middle River P.O.	:	7:a	5:	9:	9:a	8:a	10:	12:	11:
Mansion House	:ab	5:	:d	8:ab	8:	:a	9:	10:	
Stockton	:	34:	76:	66:	75:		101:	63:	55:
Wassdale Bridge	:	7:a	7:	9:	8:a	7:a	7:	6:	6:
Drainage Water Stations									
Jersey Drain	:	24:	26:	30:	31:	48:	33:	32:	34:
Grand Is.Dr.(Steamboat)	:c	4:c	6:c	5:c	4:c	8:c	5:c	6:	
Camp 35 Drain (Staten Is)	:	7:	15:	19:	19:	13:	18:	23:	30:
McDonald Drain	:	:	:	:	:	:	:	:b	15:
Bacon Island Drain	:b	11:	:	11:	9:	10:	9:	17:b	10:
Mandeville Drain	:	14:	13:	14:	15:	14:	15:	15:	14:
Camp 11 Drain (Staten Is):	:	:	:	21:	27:	46:	54:	38:	38:

a, c, d, See footnotes last page of this table.

TABLE 90 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1931
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	FEBRUARY						
	2	6	10	14	18	22	26
San Francisco, San Pablo & Suisun Bays							
: Point Orient	: 1550:	: 1470:	: 1540:	:	: 1330:	: 1320:	: 1360:
: Point Davis	: 1080:	: 1020:	: 940:ab	: 990:ab	: 760:	: 810:	: 780:
: Bulls Head Point	: 700:	: 680:	: 780:	: 840:	: 600:a	: 280:	: 500:
: Bay Point	: 465:	:	:	:	:	:	: 300:
: O and A Ferry	: 92:	: 66:	: 58:	: 81:	: 31:	: 9:	: 10:
: Innisfail Ferry	: 170:	: 190:d	: 175:	: 190:	: 220:	: 190:d	: 140:
North San Pablo Bay							
: Sonoma Creek Bridge	: 650:a	: 770:a	: 660:ab	: 760:a	: 680:a	: 680:	: 820:
: Grandview	: 950:a	: 930:a	: 940:	: 910:	: 930:	: 900:	: 980:
: Vallejo	: 790:	: 690:	: 730:	:	: 700:	: 620:	: 680:
: Lakeville	:	: 960:	: 900:a	: 1020:ad	: 900:	:	: 910:
: Cuttings Wharf	: 615:	: 460:	: 490:	: 510:a	: 635:	: 380:	: 400:
: Napa	:	:	:	: 93:	: 63:	:	: 50:
: Petaluma	: 460:	: 520:	: 580:	: a	: 600:	: 520:	: 500:
Sacramento River Delta							
: Collinsville	:	: 20:	: 22:	: 25:	: 7:	: 3:	: 7:
: Emmaton	: a 2:	: 2:	:	:	:	:	: 3:
: Sacramento	: ab 2:	: 2:	: 1:ab	: 1:a	: 1:	: 1:	: 1:
San Joaquin River Delta							
: Antioch	: 12:	: 12:	: 11:	: 19:	: 9:	: 6:	: 6:
: Jersey	: 6:	: 4:	: 5:	: 7:	: 7:	: 3:	: 5:
: Webb Pump	: 6:	: 5:	: 6:	: 7:	: 6:	: 6:	: 8:
: Central Landing	: 4:	: 4:	: 2:	: 2:	:	: 2:	: 4:
: Dutch Slough	:	:	:	:	: 11:	: 10:	: 12:
: Holland Pump	: 10:	: 10:	: 10:	: 10:	: 10:	: 12:	: 12:
: Mandeville Pump	: 10:	: 10:	: 10:	: 10:a	: 11:	: 10:	: 10:
: Rindge Pump	: 10:	: 11:	: 12:	: 12:	: 14:	: 9:	: 12:
: East Contra Costa I.D.	: 12:	: 12:	: 13:	: a	: 13:	:	: 21:
: Middle River P.O.	: 11:a	: 15:	: 9:	: a	: 9:	: 8:	: 9:
: Mansion House	:	: 9:	:	: a	: 9:	:	:
: Stockton	: 56:	:	: 61:	: 75:	:	: 64:	: 66:
: Mossdale Bridge	: 6:	: 7:ab	: 7:ab	: 7:a	: 8:	: 7:	: 7:
Drainage Water Stations							
: Jersey Drain	: 34:	: 47:	: 34:	: 35:	: 38:	: 53:	: 37:
: Grand Is. Drain (Steamboat Slu.)e	: 7:e	: 7:e	: 5:e	: 6:e	: 6:e	: 5:f	: 6:
: Camp 35 Drain (Staten Is.)	: 41:	: 28:	: 29:	: 28:	: 23:	: 23:	: 30:
: McDonald Drain	: b 16:	: 17:e	: 17:c	: 17:b	: 15:b	: 14:	: 17:
: Bacon Island Drain	: 10:	: 12:	: 10:	: 10:	: 10:	: 12:	: 9:
: Mandeville Drain	: 14:	: 15:	: 11:	: 13:	: 12:	: 13:	: 14:
: Camp 11 Drain (Staten Is.)	: 31:	: 57:	: 53:	: 45:	: 38:	: 47:	: 33:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 90 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1931
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	MARCH							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo & Suisun Bays								
: Point Orient	: 1490:	: 1460:	: 1420:	: 1340:	: 1440:	: 1230:	: 1240:	: 1210:
: Point Davis	: 960:	: 960:	: 860:	: 920:	: 910:	:	: 580:b	: 920:
: Bulls Head Point	: 710:	: 640:	: 660:	: 450:	: 490:	: 370:	: 200:	:
: Bay Point	: :a	: 260:a	: 235:	: 265:	: 240:	:	: 75:	: 163:
: O and A Ferry	: 12:	: 72:	: 35:	: 48:	: 24:	: 5:	: 3:ab	: 4:
: Innisfail Ferry	: 75:a	: 85:	: 103:	: 112:	: :a	: 106:	: 106:	: 79:
North San Pablo Bay								
: Sonoma Creek Bridge	: 760:	:	:	:	:	:	:	:
: Grandview	: 950:a	: 980:a	: 980:	: 990:	: 1020:	: 1060:	: 1050:	: 1020:
: Vallejo	: 660:	:	:	:	:	:	:	: 570:
: Lakerille	:	:	:	:	: 910:f	: 940:	: 880:	:
: Cuttings Wharf	: 600:a	: 480:	: 590:	: 540:	: 460:a	: 410:a	: 260:	: 300:
: Napa	: 67:a	: 90:	:	: 3:	:	: :a	: 8:	:
: Petaluma	: 570:a	: 660:	: 700:	: 520:	: 500:a	: 520:	: 600:	: 630:
Sacramento River Delta								
: Collinsville	: 6:a	: 4:	: 11:	: 8:	: 3:	: 1:	: 2:	: 3:
: Emmaton	: 1:	: 1:a	: 1:	: 2:	: 1:	: 1:	:	:
: Sacramento	:	:	:	: 1:ab	: 1:	: 1:	: 1:	: 1:
San Joaquin River Delta								
: Antioch	: 4:	: 6:	: 11:	: 9:	: 7:	: 3:	: 5:	: 5:
: Jersey	: 7:	: 4:	: 5:	: 5:	: 6:	: 4:	: 4:	: 5:
: Webb Pump	: 7:	: 6:	: 7:	: 6:	: 5:	: 4:	: 6:	: 4:
: Central Landing	: 4:	: 4:	: 4:c	: 3:	: 1:	: 1:	: 3:	: 4:
: Dutch Slough	: :a	: 9:	: 9:	: 9:	: 9:	:	: 8:	: 11:
: Holland Pump	: 10:	: 9:	: 11:	: 10:	: 10:	: 9:	: 11:	: 10:
: Mandeville Pump	: :b	: 10:	: 11:	: 11:	: 10:d	: 10:	: 10:	: 8:
: Rinage Pump	: 12:	: 12:	: 12:	: 14:	: 15:	: 17:	: 17:	: 13:
: East Contra Costa I.D.	: 14:	: 16:	: 12:	: 9:	: 9:	: 9:	: 9:	: 11:
: Middle River P.O.	: 12:	: 9:	: 11:	: 11:	: 14:	: 10:	: 12:	: 13:
: Mansion House	:	:	: 9:	: 8:	:	: 7:	: :a	: 11:
: Stockton	:	: 64:	: 64:	: 71:	: 83:	: 86:	:	: 67:
: Mossdale Bridge	: :ab	: 9:	: 10:	: 12:	: 15:ab	: 15:	: 13:	: :ab
Drainage Water Stations								
: Jersey Drain	: 34:	: 48:	: 41:	: 44:	: 34:	: 42:	: 34:	: 40:
: Grand Island Dr. (Steamboat)	: e 7:b	: 4:e	: 5:e	: 6:e	: 5:e	: 5:e	: 4:e	: 7:
: Camp 35 Drain (Staten Is.)	: 20:	: 17:	: 20:	: 21:	: 18:	: 18:	: 20:	: 19:
: McDonald Drain	: 16:e	: 15:c	: 17:b	: 17:	: 15:e	: 17:b	: 17:	: 18:
: Bacon Island Drain	: 11:	: 11:	: 10:	: 10:	: 9:	: 9:	: 10:	: 9:
: Mandeville Drain	: 15:	: 13:	: 14:	: 14:	: 15:	: 14:	: 14:	: 15:
: Camp 11 Drain (Staten Is.)	: 34:	: 37:	: 15:	: 25:	: 14:	: 24:	: 17:	: 28:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 90 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1931
 Samples taken by local observers approximately one and one-half hours
 after high tide.

Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	APRIL								
	2	6	10	14	18	22	26	30	
San Francisco, San Pablo & Suisun Bays									
Point Orient	:a	1520:	1580:	1420:b	1480:b	1560:	1600:	1550:b	1620:
Point Davis	:b	1020:	970:	920:b	940:b	1120:	1340:	1250:a	1270:
Wells Head Point	:b	550:	580:	500:b	630:b	730:	1000:	830:b	970:
Bay Point	:	159:a	218:	315:a	370:a	455:a	550:	:a	600:
Grand A Ferry	:b	39:	74:	45:b	162:b	275:	250:ab	210:a	270:
Sanisfail Ferry	:a	59:	70:	74:	:a	98:	200:	240:a	270:
North San Pablo Bay									
Grandview	:	:a	1050:	1110:b	1100:b	1120:a	1180:	1190:a	1160:
Vallejo	:b	590:	640:	680:b	760:b	840:	850:	850:b	970:
Lakeville	:a	870:	:	990:a	950:a	990:d	1020:	:	:
Cuttings Wharf	:b	320:	390:	440:	410:b	400:	440:	580:b	770:
Kapa	:a	16:	:	15:a	20:	:	:	:	:
Petaluma	:a	630:	660:	720:a	760:a	760:d	820:	750:a	830:
Sacramento River Delta									
Collinsville	:	4:	37:	20:a	16:a	40:	92:	107:a	81:
Keyberry	:	:	:	:	:	:	:	:a	34:
Eraton	:	:	3:	13:b	1:a	12:	4:	:	:
Sacramento	:b	1:	1:	1:b	1:b	1:	1:	1:b	1:
San Joaquin River Delta									
Antioch	:a	4:	9:	9:a	10:a	17:	70:	78:a	60:
Curtis Landing	:	:	:	:	:	:	:	:	38:
Jersey	:	3:	3:	5:a	4:a	4:	18:	17:ab	20:
Webb Pump	:d	3:	2:	4:d	5:	3:	14:	4:	5:
Central Landing	:a	4:	3:d	3:a	3:a	1:	2:	2:	:
Dutch Slough	:a	7:	8:	9:b	8:b	7:	:	7:b	9:
Holland Pump	:b	9:	7:	9:b	7:b	7:	7:	10:b	9:
Kandeville Pump	:b	9:d	9:	:b	12:b	7:	6:	7:b	6:
Ridge Pump	:a	22:	19:	20:b	21:b	16:	15:	16:a	17:
East Contra Costa I.D.	:	:	:	12:a	13:b	10:	13:	11:	:
Middle River P.O.	:	12:	12:	13:b	12:b	11:	12:	11:a	11:
Kansion House	:b	11:	11:	11:b	10:b	10:	:	:b	14:
Stockton	:a	80:	80:	:b	102:b	98:	:	92:	:
Kossdale Bridge	:b	13:d	12:ab	13:b	12:b	10:	11:ab	10:a	10:
Durham Ferry Bridge	:	:	:	:	:	:	:	:	7:
Drainage Water Stations									
Jersey Drain	:b	45:	41:	32:	43:	19:	28:	21:	42:
Grand Is. Dr. (Steamboat Sl)	e	7:	6:	6:	5:	4:	4:	5:	5:
Camp 35 Drain (Staten Is.)	:	18:	16:	12:	:	:	:	:	:
McDonald Drain	:	18:c	15:b	17:	16:e	15:b	14:	:	:
Bacon Island Drain	:	9:	8:	11:b	11:	10:	12:	10:	:
Kandeville Drain	:b	14:	15:	:	:b	13:	15:	5:b	14:
Camp 11 Drain (Staten Is.)	:	21:	36:	36:	33:	32:	47:	43:	34:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 90 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1931
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	MAY									
	2	6	10	14	18	22	26	30		
San Francisco, San Pablo & Suisun Bays										
Point Orient	:a 1540:	1610:	1600:	a 1520:	b 1700:	1640:	1670:	b 1690:		
Point Davis	:b 1320:	1320:	1280:	a 1250:	a 1280:	1330:	1410:	b 1490:		
Bulls Head Point	:b 1030:	1050:	900:	b 870:	b 870:	1200:	1110:	b 1210:		
Bay Point	:a 530:	a 600:	a 640:	a 630:	540:	a 760:	a 700:	a 810:		
O and A Ferry	:a 350:	360:	b 355:	b 405:	b 420:	a 430:	b 560:	b 600:		
Innisfail Ferry	:a 290:	350:	a 345:	a 350:	a 390:	a 440:	a 450:	a 505:		
North San Pablo Bay										
Sonoma Creek Bridge	:	:	:	:	:	a 1240:	1340:	b 1380:		
Grandview	:a 1260:	a 1200:	:	a 1270:	a 1365:	a 1450:	1460:	b 1420:		
Vallejo	:b 930:	950:	940:	:	:	a 1020:	1020:	:		
Lakeville	:a 1070:	d 1090:	a 1100:	:	:	ad 1180:	a 1200:	a 1230:		
Cuttings Wharf	:a 770:	a 530:	a 780:	a 750:	a 920:	920:	890:	a 900:		
Petaluma	:a 830:	a 890:	ad 860:	a 960:	a 970:	1040:	a 970:	a 1070:		
Sacramento River Delta										
Collinsville	:	229:	166:	a 150:	bd 290:	280:	a 255:	a 285:		
Mayberry	:a 41:	134:	b 95:	:	b 78:	200:	a 132:	a 165:		
Emmaton	:b 4:	5:	b 4:	a 6:	:	:	:	:		
Three Mile Slough Bridge:	:	a 7:	a 3:	a 6:	b 5:	14:	b 26:	a 30:		
Rio Vista Bridge	:	a 4:	b 1:	b 4:	3:	3:	b 3:	a 5:		
Junction Point	:	:	:	:	:	:	a 5:	a 5:		
Isleton Bridge	:	:	:	:	:	:	b 3:	b 5:		
Sacramento	:	:	a 1:	b 1:	b 2:	2:	a 1:	b 2:		
Mokelumne River Delta										
Southwest Point	:b 5:	a 11:	a 2:	a 4:	:	4:	:	:		
Camp 33, Staten Island	:b 2:	:	a 4:	:	ab 3:	2:	:	:		
Camp 7, Staten Island	:	:	4:	a 4:	:	:	a 7:	:		
Tyler Island Ferry	:	:	:	:	:	:	b 4:	b 4:		
Camp 11, Staten Island	:b 4:	:	4:	a 7:	:	:	a 7:	:		
Camp 29, Staten Island	:b 2:	:	a 1:	b 4:	:	4:	:	:		
Eagle Tree	:	:	8:	a 6:	:	:	a 7:	:		
Camp 25, Staten Island	:b 5:	:	a 4:	b 5:	:	4:	:	:		
New Hope Bridge	:	:	:	ab 3:	b 9:	b 2:	a 9:	b 7:		
Camp 20, Staten Island	:b 5:	:	a 6:	b 8:	:	5:	:	:		

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 90 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1931
 Samples taken by local observers approximately one and one-half hours
 after high high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	MAY (CONTINUED)								
	2	6	10	14	18	22	26	30	
San Joaquin River Delta									
: Antioch	:a	62:	144:a	88:a	90:a	70:	260:a	150:a	204:
: Curtis Landing	:a	34:	78:b	64:	:b	100:	124:a	92:a	137:
: Jersey	:a	9:	38:a	6:a	12:a	15:	95:a	44:a	43:
: Webb Pump	:	4:	8:b	6:b	6:d	7:	10:	11:	15:
: Central Landing	:a	4:	3:	3:a	3:a	4:	5:a	5:a	6:
: Dutch Slough	:b	7:	:	:a	8:b	10:a	8:a	8:	:
: Holland Pump	:b	7:b	7:a	7:b	8:b	10:	10:a	9:b	8:
: Mandeville Pump	:b	8:	8:	:a	7:b	7:	6:a	7:b	8:
: Rindge Pump	:b	16:	19:a	14:b	18:	17:	22:a	22:b	21:
: East Contra Costa I.D.	:	:	10:a	11:a	10:b	10:	9:	:a	11:
: Middle River P.O.	:a	11:	11:a	9:b	10:b	8:	7:a	8:a	11:
: Mansion House	:	:	11:a	7:b	9:	:	11:	:b	11:
: Stockton	:	:	106:b	94:b	96:b	85:	85:b	85:	:
: Mossdale Bridge	:b	9:	8:a	7:b	10:b	10:	10:a	10:b	12:
: Durham Ferry Bridge	:	6:	8:	6:c	11:	:	9:	10:	11:
Drainage Water Stations									
: Jersey Drain	:	31:	43:	40:	19:	14:	28:	16:	26:
: Grand Is. Dr. (Steamboat Sl)	c	6:c	13:c	5:b	8:c	6:c	5:c	8:	:
: Camp 35 Drain, (Staten Is.)	b	5:	16:c	4:	7:b	7:	4:	6:	:
: McDonald Drain	:	:	12:	15:	11:	13:	9:	:	:
: Bacon Island Drain	:	9:	7:	10:b	10:	10:	9:	10:	9:
: Mandeville Drain	:b	15:	15:	14:	14:b	12:	11:	9:b	9:
: Camp 11 Drain (Staten Is.)	:	19:	25:c	33:	8:b	9:	14:	9:	:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 90 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1931
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	JUNE								
	2	6	10	14	18	22	26	30	
San Francisco, San Pablo & Suisun Bays									
: Point Orient	:b 1730:	1680:	1640:	b 1680:	b 1710:	1720:	1740:	b 1740:	
: Point Davis	:b 1440:	:	a 1380:	b 1530:	b 1520:	1460:	1510:	a 1540:	
: Bulls Head Point	:b 1210:	1080:	1080:	b 1280:	b 1300:	1200:	b 1360:	b 1360:	
: Bay Point	:a 830:	800:	a 780:	a 920:	a 980:	920:	b 1160:	a 1000:	
: O and A Ferry	:b 700:	760:	b 660:	b 680:	b 740:	a 660:	b 740:	a 680:	
: Innisfail Ferry	:a 560:	600:	a 560:	a 640:	bd 740:	a 700:	a 710:	a 780:	
North San Pablo Bay									
: Sonoma Creek Bridge	:	:	1440:	b 1420:	:	:	1560:	:	
: Grandview	:a 1440:	:	a 1440:	:	a 1540:	:	1580:	:	
: Vallejo	:	:	a 1100:	:	ad 1220:	:	:	d 1380:	
: Lakeville	:d 1340:	1340:	:	:	:	:	:	:	
: Cuttings Wharf	:b 1050:	:	960:	:	a 980:	:	a 980:	:	
: Petaluma	:ad 1140:	1080:	:	:	:	:	:	:	
Sacramento River Delta									
: Collinsville	:a 285:	380:	a 340:	a 580:	470:	a 460:	ad 460:	a 600:	
: Mayberry	:	230:	:	:	:	:	:	:	
: Emmaton	:b 87:	a 88:	b 170:	b 148:	b 280:	a 192:	b 225:	b 275:	
: Three Mile Slough Bridge	:a 31:	45:	b 70:	a 76:	a 100:	a 90:	a 100:	a 155:	
: Rio Vista Bridge	:b 6:	5:	b 10:	b 34:	b 46:	29:	:	b 85:	
: Junction Point	:a 5:	3:	a 5:	a 7:	a 6:	a 8:	a 9:	a 14:	
: Liberty Ferry	:	:	:	:	ac	5:	:	a 6:	
: Isleton Bridge	:b 4:	4:	b 4:	b 10:	a 7:	a 5:	b 12:	b 21:	
: Sacramento	:b 1:	4:	a 4:	b 7:	b 2:	a 1:	a 5:	b 6:	
Mokelumne River Delta									
: Southwest Point	:b 6:	3:	a 5:	a 8:	14:	a 10:	a 7:	20:	
: Camp 33, Staten Island	:b 5:	:	a 4:	:	5:	a 7:	a 6:	10:	
: Camp 7, Staten Island	:	4:	:	a 6:	b 5:	ab 5:	ab 6:	b 7:	
: Tyler Island Ferry	:b 4:	3:	b 3:	b 3:	b 5:	b 3:	b 6:	a 8:	
: Camp 11, Staten Island	:	:	:	ab 7:	b 6:	b 5:	ab 8:	b 9:	
: Camp 29, Staten Island	:b 4:	:	a 4:	:	5:	a 6:	a 8:	8:	
: Eagle Tree	:	:	8:	a 8:	b 8:	ab 8:	ab 9:	b 8:	
: Camp 25, Staten Island	:b 6:	:	a 5:	:	6:	a 6:	a 9:	9:	
: New Hope Bridge	:b 6:	5:	b 9:	b 6:	a 7:	a 6:	b 9:	b 7:	
: Camp 20, Staten Island	:b 8:	:	a 7:	:	6:	a 7:	a 8:	10:	

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 90 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1931
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	JUNE (CONTINUED)								
	2	6	10	14	18	22	26	30	
San Joaquin River Delta									
: Antioch	:a	280:	280:a	270:a	340:a	420:	450:a	410:a	475:
: Curtis Landing	:	:	155:	:	:b	234:a	280:a	310:	:
: Jersey	:b	118:	60:a	42:a	90:b	248:a	160:a	155:a	260:
: Webb Pump	:	20:	15:	26:	36:b	49:a	40:	76:	95:
: Central Landing	:	:	7:a	7:a	8:a	12:a	13:ad	13:a	24:
: Dutch Slough	:	:	:	:	:	:acd	29:a	42:b	56:
: Holland Dam	:	:e	12:ab	8:	:c	14:b	16:a	15:b	18:
: Holland Pump	:b	7:	8:ab	8:b	10:c	10:b	14:a	12:b	17:
: Mandeville Pump	:b	9:	9:a	9:b	9:b	11:a	12:a	15:b	19:
: King Island Pump	:	:	:	:	:b	12:b	11:	:b	14:
: Rindge Pump	:b	20:	19:a	17:b	23:b	17:a	20:a	19:a	19:
: East Contra Costa I.D.	:b	12:	10:a	10:b	13:b	12:a	12:	:a	12:
: Middle River P.O.	:b	11:	9:a	9:a	10:b	10:a	10:a	11:	13:
: Mansion House	:b	8:	:a	8:	:b	12:	:b	11:b	12:
: Stockton Country Club	:	:	:a	28:b	26:	:a	30:	:	:
: Stockton	:e	76:	:b	62:	:b	80:b	80:b	76:b	76:
: Mossdale Bridge	:b	11:	11:a	13:b	9:b	9:a	8:a	11:	:
: Durham Ferry Bridge	:	9:	8:	10:b	11:	9:	9:	10:	8:
Drainage Water Stations									
: Jersey Drain	:b	27:	17:	30:	29:b	57:	56:	63:	77:
: Grand Is. Dr. (Steamboat Sl.)	:	7:	6:	7:	13:ab	4:	8:	8:	9:
: Camp 35 Dr. (Staten Is.)	:b	7:	9:	8:	9:	6:b	8:b	10:b	9:
: McDonald Drain	:	:	:	:	:	12:	12:	13:	14:
: Bacon Island Drain	:	11:	8:	10:	11:	11:	11:	13:	14:
: Mandeville Drain	:b	9:	10:	9:b	8:b	11:	12:	17:b	17:
: Camp 11 Dr. (Staten Is.)	:b	8:	7:	4:	7:	7:b	7:b	9:b	10:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 90 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1931
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	JULY							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	:	1770:	1780:b	1780:	1770:	1820:	1830:b	1840:
Point Davis	:b	1480:	1640:	1660:b	1670:	1680:a	1680:a	1700:b
Bulls Head Point	:b	1340:	1370:	1390:b	1500:	1380:	1480:b	1610:b
O and A Ferry	:a	780:	870:	980:b	1080:	1020:	1070:b	1230:b
Innisfail Ferry	:	840:a	780:a	910:a	1030:	1080:a	1140:b	1230:
North San Pablo Bay								
Sonoma Creek Bridge	:a	1590:	1660:	:	:	:	:	:
Grandview	:a	1570:	1660:	a	1670:	a	1760:	:
Vallejo	:a	1320:	d	1420:	b	1560:	:	:
Cuttings Wharf	:a	1050:	1200:	:	:	:	ad	1340:
Sacramento River Delta								
Collinsville	:d	620:a	600:a	660:a	810:	880:a	890:a	1090:a
Mayberry	:	:	:	a	660:	a	770:	:
Emmaton	:a	280:a	365:a	470:b	540:	560:	650:	:
Three Mile Slough Bridge	:b	210:	250:a	290:a	430:a	430:	500:a	560:a
Rio Vista Bridge	:b	98:	132:b	196:b	315:	370:	450:b	520:b
Junction Point	:	:	:	:	260:	280:a	370:a	390:
Liberty Ferry	:	a	24:ae	22:a	58:	a	116:	:
Isleton Bridge	:	:	68:b	83:b	146:	230:	250:b	360:b
Howard Ferry	:	:	:	a	98:	170:a	190:a	245:r
Sutter Slough	:	:	:	:	58:a	83:a	135:b	220:
Little Holland Ferry	:	:	:	:	:	:	ab	110:a
Ryde	:	:	d	6:a	29:a	48:a	71:a	109:a
R. D. 2068	:	:	:	a	4:	5:a	10:a	35:a
Walnut Grove	:	:	:	b	21:	27:f	76:	81:b
Paintersville Bridge	:	:	:	b	25:	20:b	48:r	92:b
Hood Ferry	:	:	:	:	6:	8:	18:	15:
Freeport Bridge	:	:	:	b	7:	7:r	8:b	8:b
Sacramento	:	b	6:	6:b	7:	5:a	5:b	7:b
Mokelumne River Delta								
Southwest Point	:	18:a	26:a	22:a	73:	114:b	145:	230:
Camp 33, Staten Island	:	9:a	9:a	13:a	33:	47:b	72:	105:
Camp 7, Staten Island	:b	7:ab	8:ab	10:c	35:b	40:b	56:	91:
Tyler Island Ferry	:	a	5:a	5:a	6:	b	24:a	31:
Camp 11, Staten Island	:b	8:ab	8:ab	10:c	23:	25:b	31:	49:
Camp 29, Staten Island	:	8:a	9:a	11:a	19:	31:b	45:	55:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 90 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1931
 Samples taken by local observers approximately one and one-half hours
 after high tide.

Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	JULY (CONTINUED)								
	2	6	10	14	18	22	26	30	
Mokelumne River Delta (Continued)									
: Eagle Tree	:b	9:ab	8:ab	7:c	11:	11:b	15:	22:	16:
: Camp 25, Staten Island	:	7:a	8:a	11:a	14:	21:b	29:	38:	43:
: New Hope Bridge	:b	7:	:a	8:b	11:	11:b	11:	13:	25:
: Camp 20, Staten Island	:	9:a	9:a	14:a	12:	14:b	19:	26:e	26:
San Joaquin River Delta									
: Antioch	:a	520:	540:a	510:a	710:	830:	920:a	900:	:
: Curtis Landing	:b	440:a	440:a	425:	:a	640:a	660:ab	830:a	850:
: Jersey	:b	365:a	325:a	270:a	430:	600:a	500:b	790:b	780:
: Webb Pump	:	102:	146:	168:	245:	310:b	380:	460:	480:
: Central Landing	:a	28:a	35:a	40:a	60:	104:a	122:a	180:	260:
: Dutch Slough	:b	78:a	82:a	79:a	116:	:	:	:	:
: Ward Landing	:	:	:	:	:	:	:ac	140:	167:
: Holland Dam	:	:ab	20:a	23:b	53:	60:	61:b	100:b	140:
: Holland Pump	:b	19:ab	22:a	24:b	38:	46:	51:b	80:b	105:
: Mandeville Pump	:	:ab	19:a	29:b	43:	55:a	65:a	111:b	140:
: King Island Pump	:b	16:b	17:	:d	24:	:b	47:	:bd	74:
: Rindge Pump	:b	18:a	22:a	22:b	23:	25:a	28:a	35:b	49:
: Orwood Bridge	:	:	:	:b	25:	31:	:b	61:b	74:
: East Contra Costa I.D.	:b	12:a	12:a	14:a	15:	19:b	21:a	31:b	39:
: Middle River P.O.	:bd	13:a	15:b	18:a	22:a	27:a	34:b	57:b	79:
: Mansion House	:b	10:a	15:a	13:b	24:	26:	:a	25:b	66:
: Stockton Country Club	:b	22:a	24:	:b	25:e	26:a	29:a	9:b	44:
: Clifton Court Ferry	:	:	:	:b	16:	18:a	19:b	27:b	34:
: Stockton	:b	76:b	82:	:ab	80:	:b	88:	:	:
: Garwood Bridge	:	:	:	:	:	:	:	:	39:
: Brandt Bridge	:	:	:	:	:	:	:	:	33:
: Williams Bridge	:	:	:	:b	15:	15:b	16:b	20:b	30:
: Whitehall	:	:	:	:	:	:	:	:	16:
: Mossdale Bridge	:b	8:a	12:a	11:b	10:	9:a	9:	:b	11:
: Durham Ferry Bridge	:	8:	7:	10:	8:	:	8:	8:	8:
Drainage Water Stations									
: Jersey Drain	:b	79:	141:	162:	130:	120:	92:b	177:b	180:
: Grand Is. Dr. (Steamboat Sl.)	c	8:	:c	11:c	32:c	52:	:c	116:	:
: Camp 35 Dr. (Staten Is.)	:b	8:b	11:b	14:b	23:	28:	:c	55:	:
: McDonald Drain	:	13:	15:	20:	23:	24:	30:	46:	55:
: Bacon Island Drain	:	15:	18:	21:	29:	:	47:	75:	83:
: Mandeville Drain	:b	18:	19:	27:b	36:	44:	63:	83:b	115:
: Camp 11, Dr. (Staten Is.)	:b	8:b	8:b	12:b	19:b	24:	:c	42:	:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 90 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1931
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	AUGUST								
	2	6	10	14	18	22	26	30	
San Francisco, San Pablo and Suisun Bays									
: Point Orient	: 1820:	: 1810:	: 1860:b	: 1860:	: 1840:	: 1870:b	: 1840:	: 1820:	
: Point Davis	: a 1760:a	: 1770:	: 1770:b	: 1810:a	: 1690:a	: 1780:b	: 1810:a	: 1740:	
: Bulls Head Point	: e 1660:	: 1610:b	: 1610:b	: 1570:	: 1600:	: 1640:b	: 1690:	: 1560:	
: Bay Point	:	:	:	:	:	: a 1440:a	: 1540:a	: 1450:	
: O and A Ferry	: 1240:	: 1250:b	: 1320:b	: 1320:	: 1300:	: 1390:b	: 1380:	: 1360:	
: Innisfail Ferry	: 1180:a	: 1140:a	: 1260:	:	: 1340:	: 1400:a	: 1380:	:	
North San Pablo Bay									
: Grandview	: 1820:	:	: 1820:	:	: 1800:	:	: a 1870:	:	
: Vallejo	: 1620:	:	: a 1660:	:	:	:	:	:	
: Cuttings Wharf	: 1680:	:	: a 1700:	:	: 1570:	:	: a 1750:	:	
Sacramento River Delta									
: Collinsville	: 1140:	:	: a 1190:a	: 1120:a	: 1180:a	: 1230:a	: 1240:	: 1190:	
: Mayberry	:	:	: a 1010:	:	:	:	:	:	
: Emnaton	: 870:	: 860:a	: 870:b	: 880:	: 930:a	: 780:a	: 840:a	: 930:	
: Three Mile Slough Bridge	: a 680:a	: 760:b	: 760:b	: 790:	: 790:b	: 670:a	: 840:	: 780:	
: Rio Vista Bridge	: 540:	: 650:b	: 700:b	: 660:	: 710:b	: 680:b	: 740:	: 680:	
: Junction Point	: a 440:a	: 470:a	: 520:a	: 570:a	: 550:a	: 590:a	: 615:a	: 600:	
: Liberty Ferry	:	:	: b 390:	:	: ac 490:ab	: 520:ab	: 540:	:	
: Isleton Bridge	: 420:	: 440:b	: 510:b	: 545:	: b 595:b	: 635:	: 460:	:	
: Howard Ferry	:	: 380:	: b 480:	: 500:a	: 485:	:	: 460:	:	
: Sutter Slough	:	: de 260:a	: 235:b	: 320:	: a 225:b	: 155:	: 120:	:	
: Little Holland Ferry	: 198:	: 230:a	: 235:a	: 220:	: 300:a	: 225:b	: 250:	: 120:	
: Ryde	: ab 280:ab	: 220:ab	: 230:ab	: 220:ab	: 160:	: a 150:a	: 80:	:	
: R. D. 2068	: 86:a	: 122:a	: 137:a	: 190:	:	: a 175:	: 100:	:	
: Walnut Grove	: 160:b	: 180:b	: 200:b	: 220:	: 120:b	: 126:b	: 120:c	: 38:	
: Paintersville Bridge	: 122:b	: 144:b	: 139:b	: 110:	: 63:b	: 59:b	: 28:	: 11:	
: Hood Ferry	: 13:	: 12:a	: 8:a	: 8:	: 10:a	: 11:a	: 10:	: 10:	
: Freeport Bridge	: 7:b	: 8:b	: 10:b	: 9:	: 10:a	: 11:b	: 10:	: 9:	
: Sacramento	: 8:a	: 8:b	: 8:c	: 8:a	: 9:a	: 9:b	: 10:	: 7:	
Mokelumne River Delta									
: Southwest Point	: 250:b	: 260:	: 315:	: 390:	: 340:	: 380:	: 390:	: 270:	
: Camp 4, Staten Island	: e 148:	: 90:	: 265:	: 220:	: 215:	: 255:	: 200:	:	
: Camp 33, Staten Island	: 140:e	: 160:	: 195:	: 240:	: 210:	: 220:	: 245:	: 200:	
: Camp 7, Staten Island	: 72:e	: 92	: 35:	: 185:	: 165:	: 160:	: 185:	: 130:	

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 90 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1931
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	AUGUST (CONTINUED)							
	2	6	10	14	18	22	26	30
Mokelumne River Delta (Continued)								
Tyler Island Ferry	e 100:	155:a	175:ab	200:	200:a	155:e	145:b	64:
Camp 11, Staten Island	: 30:	31:	16:	68:	58:	56:	82:	48:
Camp 29, Staten Island	: 72:	88:	93:	115:	122:	128:	119:	118:
Eagle Tree	: 10:	7:	3:	6:	2:	3:	4:	3:
Camp 25, Staten Island	: 44:	56:	56:	68:	73:	84:	85:	72:
New Hope Bridge	: 3:	3:	1:	2:	1:	1:	1:	1:
Camp 20, Staten Island	: 23:	22:	17:	23:	26:	26:	26:	17:
San Joaquin River Delta								
Antioch	: 1000:	:a	1050:a	1090:	1160:a	1030:a	1100:	1080:
Curtis Landing	: :d	770:a	920:ab	1020:	990:a	920:b	1060:	:
Jersey	: 720:	:a	700:	:	:	:	:	:
Webb Pump	:d	460:	505:a	520:	600:	540:	600:	670:
Central Landing	: 280:	270:	390:a	300:a	340:	425:	415:	350:
Dutch Slough	: :ab	295:ade	300:	:ac	380:	:	:	:
Ward Landing	: 165:	:a	225:a	238:	275:a	250:a	310:	290:
Holland Dam	:b	132:	143:a	165:b	220:a	220:a	240:b	315:
Holland Pump	:bd	116:a	74:b	180:b	180:a	200:a	240:b	250:
McDonald Pump	: 155:	140:ad	170:	240:	:a	201:	280:	260:
Mandeville Pump	:d	158:a	190:a	220:b	265:a	230:a	280:b	320:
King Island Pump	: :b	89:	102:	:	150:	:b	175:	200:
Rindge Pump	: 70:a	72:a	86:b	120:	112:a	160:b	146:	170:
Orwood Bridge	: 82:b	100:b	123:b	144:	154:b	182:b	215:	200:
East Contra Costa I.D.	: 45:a	54:a	71:b	105:a	102:a	116:b	129:	134:
Middle River P.O.	: 92:a	86:a	130:b	180:	:a	200:a	230:	220:
Mansion House	: 77:a	76:b	118:	130:	:a	140:b	170:	170:
Stockton Country Club	: 45:	53:a	60:	:	:a	84:a	97:	102:
Clifton Court Ferry	: 39:a	39:	56:b	68:a	37:a	81:b	94:	80:
Stockton	: 89:b	97:	:	:	:b	106:	:a	104:
Garwood Bridge	: :a	45:b	55:b	65:a	58:a	66:b	82:	80:
Brandt Bridge	: 38:a	35:a	39:a	43:	37:a	38:a	34:	40:
Williams Bridge	: 31:b	43:b	52:b	58:	68:b	84:b	94:	100:
Whitehall	: 18:af	16:b	19:b	21:a	24:a	29:b	28:	28:
Mossdale Bridge	: 9:a	10:b	10:b	9:a	9:a	10:b	9:b	6:
Durham Ferry Bridge	: 7:	8:	8:	8:	9:	9:	7:	6:
Drainage Water Stations								
Jersey Drain	: 325:	:	125:	:	:	:	:	:
Grand Is. Dr. (Steamboat Sl.)	:e154:e	160:e	155:e	180:e	260:e	240:e	150:e	130:
Camp 35 Dr. (Staten Is.)	: 43:	:	:e	66:	:	:	85:	80:
McDonald Drain	: 64:	87:	78:	:	:	:	:	:
Bacon Island Drain	: 92:	48:	75:	126:	180:	180:	158:	170:
Mandeville Drain	: 130:	171:	180:b	210:	240:	215:b	220:	180:
Camp 11 Dr. (Staten Is.)	: 30:	:	:e	54:	:	:	58:	10:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 90 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1931
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	SEPTEMBER								
	2	6	10	14	18	22	26	30	
San Francisco, San Pablo and Suisun Bays									
Point Orient	1800:	1320:b	1780:	1800:	1760:	1800:		b 1790:	
Point Davis	:	:	:	:	:	1750:		a 1730:	
Bulls Head Point	1620:	1660:b	1580:	1620:	1640:b	1600:	1500:	1550:	
Bay Point	1520:	1500:a	1460:	1520:ab	1440:a	1440:	1420:	1440:	
O and A Ferry	1320:	1360:b	1360:	1320:	1320:b	1260:	1150:b	1190:	
Innisfail Ferry	1360:	1360:a	1340:	1380:a	1380:a	1390:	1390:b	1390:	
North San Pablo Bay									
Grandview	1820:		a 1740:		1820:		1835:		
Vallejo	:		a 1680:		a 1700:		1640:		
Cuttings Wharf	1600:		a 1780:		1800:		1740:		
Sacramento River Delta									
Collinsville	a 1220:	a 1200:	a 1180:	1260:	a 1120:	a 960:	1070:	a 920:	
Ematon	1000:	955:	:	970:		a 660:	680:	a 540:	
Three Mile Slough Bridge	a 860:	820:a	840:	740:a	680:b	600:	585:	a 410:	
Rio Vista Bridge	740:	700:b	640:	680:	400:b	545:	520:		
Junction Point	a 620:	a 600:	a 430:	600:	a 310:	a 440:	435:		
Liberty Ferry	b 560:	ab 460:	ab 400:	a 540:	280:	a 350:	315:	a 200:	
Isleton Bridge	560:	480:b	440:	460:	230:		42:	b 198:	
Howard Ferry	a 480:	a 210:	a 37:	50:	18:	a 4:			
Sutter Slough	a 48:		b 12:	a 7:	a 5:		ab 4:	a 4:	
Little Holland Ferry	a 90:	b 88:		27:	a 11:	a 8:	4:	a 5:	
Ryde	a 42:	19:	12:	8:	a 5:	a 3:	4:	a 5:	
R. D. 2068	160:	a 150:	a 128:			a 280:	238:	a 270:	
Walnut Grove	28:		b 10:	8:			3:		
Paintersville Bridge	e 10:	b 10:	b 7:	8:	ab 4:	b 3:	4:		
Hood Ferry	a 9:	a 9:	a 7:		a 4:	a 4:	3:	a 3:	
Freeport Bridge	:		b 7:	6:	b 4:	b 3:	3:		
Sacramento	a 8:	a 5:	a 5:	5:	a 4:	b 2:	ab 3:	a 3:	
Mokelumne River Delta									
Southwest Point	380:	e 285:	340:	256:	a 134:	a 142:	ab 105:	a 70:	
Camp 4, Staten Island	210:	200:	230:	166:					
Camp 33, Staten Island	200:	e 160:	230:	156:	a 116:	a 98:	ab 80:	a 60:	
Camp 7, Staten Island	160:	190:	230:	172:	ab 130:	ab 116:	ac 104:	ab 99:	
Tyler Island Ferry	36:			8:			3:	a 3:	
Camp 11, Staten Island	82:	96:	118:	134:	ab 76:	ab 100:	ac 107:	ab 91:	
Camp 29, Staten Island	152:	146:	182:	166:	a 148:	a 132:	ab 116:	a 94:	

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 90 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1931
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	SEPTEMBER (CONTINUED)							
	2	6	10	14	18	22	26	30
Mokelumne River Delta (Continued)								
Eagle Tree	4:	41:	26:	48:ab	15:ab	20:ac	29:ab	33:
Camp 25, Staten Island	96:	94:	146:	164:a	136:a	130:ab	133:a	123:
New Hope Bridge	1:	1:	6:	23:	:	20:ab	21:a	21:
Camp 20, Staten Island	31:	49:	79:	117:a	91:a	98:ab	124:a	114:
San Joaquin River Delta								
Antioch	1160:a	1240:a	1100:	1200:	1170:a	980:	940:a	870:
Curtis Landing	1060:	:	910:	1040:	1060:a	930:	860:a	760:
Jersey	800:	:	800:	910:	:	:	690:	:
Webb Pump	680:b	640:b	620:	660:	600:	545:	490:	470:
Central Landing	a 310:a	320:a	250:	212:a	180:a	295:	178:a	110:
Dutch Slough	:	:	:	510:a	440:a	485:	450:b	408:
Ward Landing	320:a	330:a	330:a	350:a	320:a	320:	310:a	325:
Holland Dam	:	300:	f 330:ab	315:b	310:b	315:b	315:b	326:
Holland Pump	:	250:	f 270:ab	280:b	290:b	325:b	282:	282:
McDonald Pump	ab 270:ab	280:ab	246:ab	305:ab	270:ab	290:b	290:b	263:
Mandeville Pump	a 325:a	330:a	350:a	350:a	340:a	345:	340:a	315:
King Island Pump	:	:	:	:	b 261:	230:	235:	:
Rindge Pump	a 160:a	170:b	180:a	174:a	198:a	188:	196:a	187:
Orwood Bridge	230:c	230:b	230:	246:b	250:b	255:	260:b	253:
East Contra Costa I.D.	a 140:a	156:b	150:a	160:a	174:a	180:ab	174:	:
Middle River P.O.	e 210:a	240:a	250:a	240:a	262:a	255:ab	270:a	265:
Mansion House	190:a	190:b	220:a	210:a	200:a	220:	220:a	235:
Stockton Country Club	a 98:a	120:	a 122:a	110:a	118:	a 89:	:	:
Clifton Court Ferry	94:a	110:b	100:a	128:a	130:a	130:	130:	:
Stockton	:	:	a 132:	:	:	114:	:	:
Garwood Bridge	a 80:ab	80:b	92:	a 46:b	70:	69:a	10:	10:
Brandt Bridge	a 27:a	14:a	10:a	8:a	7:a	7:	8:a	8:
Williams Bridge	118:b	80:	:	96:a	60:b	50:	42:	:
Whitehall	a 31:a	24:b	23:a	24:a	16:b	16:	a 12:	12:
Mossdale Bridge	a 8:a	7:b	8:a	9:a	8:b	7:b	9:a	8:
Durham Ferry Bridge	7:	6:	7:	7:	6:	6:	6:	6:
Drainage Water Stations								
Jersey Drain	70:	:	70:	72:	:	:	74:	:
Grand Is. Dr. (Steamboat Sl.)	124:	130:	140:	130:	86:	98:	53:	61:
Camp 35 Dr. (Staten Is.)	30:	9:	17:	16:	13:	13:c	91:	109:
Bacon Island Drain	110:f	110:	160:	180:	150:	118:	124:	125:
Mandeville Drain	190:	190:	200:	210:	190:	210:	200:	194:
Camp 11 Dr. (Staten Is.)	8:	6:	6:	8:	9:	18:c	23:	75:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 90 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1931
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	OCTOBER								
	2	6	10	14	18	22	26	30	
San Francisco, San Pablo and Suisun Bays									
: Point Orient	: 1800:	1800:	1800:b	1795:	1780:	1770:	1765:	1760:	
: Point Davis	: :	1760:	1790:a	1690:	1705:	1700:abl	1655:a	1550:	
: Bulls Head Point	: 1615:	1600:	1550:	1510:	1485:	1475:	1390:	1455:	
: Bay Point	: a 1380:a	1300:	1365:	1410:	1320:	1315:	1275:	1190:	
: O and A Ferry	: 1100:	1095:	1120:b	1140:a	995:	1060:	965:	855:	
: Innisfail Ferry	: 1380:a	1335:	1300:a	1290:	1230:	1210:	1240:	1010:	
North San Pablo Bay									
: Grandview	: 1800:	:	1835:	:	1765:	:	1750:	:	
: Vallejo	: 1620:	:	:	:	:	:	:	:	
: Cuttings Wharf	: a 1790:	:	1800:	:	a 1745:	:	ad1760:	:	
Sacramento River Delta									
: Collinsville	: 950:a	880:	880:a	830:a	710:	725:	800:	560:	
: Emmaton	: e 450:	:	:	b 475:	385:	517:	310:a	272:	
: Three Mile Slough Bridge	: 545:a	417:	457:a	375:a	425:	435:	225:a	227:	
: Rio Vista Bridge	: 440:b	350:	365:b	292:	:	291:	200:	142:	
: Junction Point	: 360:a	200:	265:b	145:	85:	188:	125:	133:	
: Liberty Ferry	: acd190:c	212:	151:b	156:	111:	120:	75:	68:	
: Isleton Bridge	: 238:b	116:	114:	177:	5:	118:	3:	4:	
: Howard Ferry	: a 9:	:	:	:	a 2:	:	2:	2:	
: Sutter Slough	: a 4:a	3:	2:	:	:	:	:	:	
: Little Holland Ferry	: 6:a	4:	a 3:	a 3:	3:	:	2:	:	
: Ryde	: a 3:	:	:	:	:	:	:	:	
: R. D. 2068	: a 180:a	188:	158:a	148:a	108:	154:	192:a	134:	
: Walnut Grove	: 3:	:	:	:	:	:	:	:	
: Paintersville Bridge	: 3:	:	:	:	:	:	:	:	
: Hood Ferry	: a 4:	:	:	:	:	:	:	:	
: Freeport Bridge	: 3:	:	:	:	:	:	:	:	
: Sacramento	: e 4:b	2:ab	1:a	2:a	2:ab	1:ab	1:a	1:	
Mokelumne River Delta									
: Southwest Point	: a 76:a	111:	90:b	76:a	76:	62:a	24:a	20:	
: Camp 33, Staten Island	: a 61:a	70:	66:b	43:a	38:	37:a	22:a	16:	
: Camp 7, Staten Island	: ab 87:ab	91:b	78:a	71:a	63:b	59:ab	54:a	42:	
: Tyler Island Ferry	: 3:a	3:	2:b	1:a	2:	1:	2:	2:	
: Camp 11, Staten Island	: ab 94:ab	86:b	82:a	77:a	72:b	69:ab	64:a	60:	
: Camp 29, Staten Island	: a 87:a	74:	75:b	65:a	56:	55:a	44:a	37:	
: Eagle Tree	: ab 36:ab	39:b	50:a	53:a	57:b	56:ab	55:a	57:	

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 90 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1931
 Samples taken by local observers approximately one and one-half hours
 after high high tide.

Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	OCTOBER (CONTINUED)								
	2	6	10	14	18	22	26	30	
Mokelumne River Delta (Continued)									
Camp 25, Staten Island	:a	116:a	100:	92:b	89:a	83:	78:a	68:a	67:
New Hope Bridge	:a	22:a	30:	50:	37:	:	:b	64:a	45:
Camp 20, Staten Island	:a	116:a	114:	110:b	104:a	102:	96:a	91:a	89:
San Joaquin River Delta									
Antioch	:	945:a	820:	875:a	785:	760:	725:	690:	610:
Curtis Landing	:	:a	695:	705:b	635:	660:	660:ab	475:a	465:
Jersey	:	:a	600:	:	:a	430:	532:	435:a	390:
Webb Pump	:	390:b	430:	405:	400:	332:	327:	292:a	260:
Central Landing	:	188:	:	151:a	99:a	172:	98:	93:a	62:
Dutch Slough	:a	410:a	384:ab	387:	:	:	348:	337:	323:
Ward Landing	:	278:a	225:	270:a	216:a	246:	185:	212:	132:
Holland Dam	:	:a	328:	305:bd	310:a	303:	302:	292:	282:
Holland Pump	:	:a	292:	290:bd	283:a	279:	270:	263:	256:
McDonald Pump	:	:e	266:ad	269:e	219:e	197:e	215:e	201:e	187:
Wandeville Pump	:a	320:a	311:	304:	:a	283:	276:	287:a	255:
King Island Pump	:	220:a	216:	224:a	230:b	223:	200:	199:	191:
Ridge Pump	:e	172:a	187:	183:b	155:a	141:	130:	133:a	106:
Orwood Bridge	:	277:b	268:	272:cd	254:b	259:	244:	235:d	232:
East Contra Costa I.D.	:a	180:a	187:	199:b	189:	:	200:	197:	:
Middle River P.O.	:a	260:a	268:ab	268:a	229:a	257:	253:ab	215:a	232:
Mansion House	:a	236:a	240:	237:b	220:	:	234:ab	195:	:
Stockton Country Club	:a	87:ac	91:ab	89:a	80:	:	49:	:	:
Clifton Court Ferry	:	109:a	112:	125:b	66:a	103:	69:	61:	21:
Stockton	:	130:b	76:	74:	:b	84:	89:	73:	51:
Garwood Bridge	:	:a	46:	43:a	13:a	19:	25:	17:a	13:
Brandt Bridge	:a	9:a	8:	8:a	3:a	8:	8:	8:a	8:
Williams Bridge	:a	21:b	19:	24:b	11:c	11:	8:	8:	11:
Whitehall	:a	11:a	12:	8:b	8:b	8:	8:	8:a	9:
Mossdale Bridge	:a	8:a	8:	8:b	8:a	7:	8:ab	8:a	9:
Durham Ferry Bridge	:	7:c	5:c	6:c	6:c	6:	7:	8:	9:
Drainage Water Stations									
Jersey Drain	:	:	78:	:	:	63:	60:	60:	83:
Grand Is. Dr. (Steamboat Sl.)	:e	62:e	63:e	52:e	19:e	25:	:e	13:	:
Camp 35 Dr. (Staten Is.)	:b	119:b	112:b	99:	93:	80:	91:b	59:	59:
Bacon Is. Drain	:	133:	191:	190:	204:	255:	247:	206:	182:
Wandeville Drain	:	195:	:	196:	187:	188:	186:	191:	187:
Camp 11 Dr. (Staten Is.)	:b	100:b	102:b	95:	79:	48:	34:b	58:	45:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 90 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1931
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	NOVEMBER								
	2	6	10	14	18	22	26	30	
San Francisco, San Pablo and Suisun Bays									
Point Orient	1755:	:	1785:	1761:	1735:	1780:	1720:	1770:	
Point Davis	:	1490:	1590:	1510:	1515:	1455:	1470:	1370:	
Bulls Head Point	1345:	1300:	1360:	1385:	a 1040:	1010:	1230:	1080:	
Bay Point	:	ab1095:	b 1155:	1070:	a 930:	850:	970:	840:	
O and A Ferry	825:	740:	780:	815:	595:	655:	640:	610:	
Innisfail Ferry	:	1030:	945:	935:	985:	1015:	a 870:	720:	
North San Pablo Bay									
Grandview	a 1775:	:	1740:	:	1650:	:	1690:	:	
Cuttings Wharf	1640:	:	1585:	:	1500:	:	a 1470:	:	
Sacramento River Delta									
Collinsville	a 520:	510:	590:	a 525:	455:	380:	a 255:	a 282:	
Emmaton	:	253:	289:	a 253:	163:	85:	153:	100:	
Three Mile Slough Bridge	270:	ab 202:	231:	246:	113:	84:	a 44:	75:	
Rio Vista Bridge	153:	128:	132:	128:	28:	32:	19:	11:	
Junction Point	a 68:	:	76:	a 30:	13:	7:	4:	4:	
Liberty Ferry	66:	57:	39:	a 29:	21:	10:	10:	10:	
Isleton Bridge	3:	18:	37:	4:	2:	1:	4:	1:	
R. D. 2068	a 167:	145:	127:	:	76:	82:	:	80:	
Sacramento	a 2:	1:	ab 2:	a 1:	1:	ab 2:	a 2:	a 2:	
Mokelumne River Delta									
Southwest Point	a 41:	42:	a 24:	a 28:	19:	6:	a 13:	a 5:	
Camp 33, Staten Island	a 14:	14:	a 9:	a 10:	11:	9:	a 6:	a 8:	
Camp 7, Staten Island	ab 38:	ab 31:	ab 30:	ae 32:	b 27:	b 24:	ab 23:	ab 31:	
Camp 11, Staten Island	ab 59:	ab 52:	ab 49:	ae 52:	b 45:	b 38:	ab 41:	ab 46:	
Camp 29, Staten Island	a 28:	21:	a 19:	a 20:	17:	17:	a 12:	a 21:	
Eagle Tree	ab 60:	ab 57:	ab 57:	ae 59:	b 56:	b 53:	ab 53:	ab 51:	
Camp 25, Staten Island	a 52:	55:	a 44:	a 42:	37:	40:	a 33:	a 40:	
New Hope Bridge	a 48:	48:	ab 48:	a 48:	47:	52:	:	a 32:	
Camp 20, Staten Island	a 85:	78:	a 75:	a 72:	62:	62:	a 53:	a 57:	

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 90 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1931
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	NOVEMBER (CONTINUED)							
	2	6	10	14	18	22	26	30
San Joaquin River Delta								
: Antioch	: 560:	485:	560:	535:	430:	333:	375:	:
: Curtis Landing	:a 430:	465:	390:a	430:	365:ab	215:	305:a	215:
: Jersey	:a 360:	:	:	:	:	:ab 245:	:	:
: Webb Pump	: 221:	216:	235:	185:	169:	132:	128:	109:
: Central Landing	:a 76:	71:	45:a	73:	15:	72:	74:a	18:
: Dutch Slough	:a 290:	282:	280:a	247:	:	:	:a	185:
: Ward Landing	: 201:	146:	163:a	139:	154:	148:	136:	132:
: Holland Dam	:a 267:	261:	253:a	241:	:	:	:	:
: Holland Pump	:a 253:	241:	229:a	217:	:	:	:	:
: McDonald Pump	: 190:d	171:d	175:d	149:	152:	:b	170:	:
: Mandeville Pump	:a 237:	234:	225:a	203:	201:	201:	:a	168:
: King Island Pump	: 172:	151:ab	167:	140:	130:ab	143:	123:	114:
: Rindge Pump	:a 76:	106:a	107:a	84:	82:	88:	74:a	57:
: Orwood Bridge	: 223:	210:	209:	199:	181:c	171:	163:	150:
: East Contra Costa I.D.	:a 172:	159:	154:a	133:	:	126:a	99:a	100:
: Middle River P.O.	:a 221:ab	205:	212:a	198:	181:ab	172:a	168:a	153:
: Mansion House	:a 170:	185:	184:a	188:	:	114:	:a	120:
: Stockton Country Club	:	:	:	:	:	:ab 25:a	26:	:
: Clifton Court Ferry	:a 12:	:	:a	15:	28:	18:	13:a	11:
: Stockton	:	71:	55:	58:	58:	:	45:	:
: Garwood Bridge	:a 12:	16:	12:a	15:	17:	14:a	11:a	9:
: Brandt Bridge	:a 9:	10:	12:a	9:	:	:	:	:
: Williams Bridge	: 20:	11:	14:	11:	11:	9:	11:	7:
: Whitehall	:a 9:	9:	10:	:	:	:	:	:
: Mossdale Bridge	:a 11:	10:d	10:a	9:	8:	:	8:a	10:
Drainage Water Stations								
: Jersey Drain	: 68:	:	:	:	:b	94:	:	:
: Grand Is. Dr. (Steamboat Sl.)	21:	21:	22:	17:	:	21:	16:	17:
: Camp 35 Dr. (Staten Is.):b	54:b	61:b	53:e	54:b	51:	50:b	62:	46:
: Bacon Island Drain	: 175:	168:	160:	96:	111:	96:	68:	63:
: Mandeville Drain	: 184:	180:	180:	176:	176:	172:	:	165:
: Camp 11 Dr. (Staten Is.):b	74:b	62:b	64:e	59:b	73:	60:b	51:	48:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 90 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1931
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	DECEMBER								
	2	6	10	14	18	22	26	30	
San Francisco, San Pablo and Suisun Bays									
Point Orient	:bd1750:	1660:	1820:	1680:	1660:	1650:	1680:	1350:	
Point Davis	: 1390:	1400:a	1500:	1320:	1310:	1415:	:a	385:	
Bulls Head Point	:a 1020:	1220:	1235:	975:a	965:	1235:	1020:	95:	
Bay Point	: 880:	960:	:	730:a	690:	950:	:	45:	
O and A Ferry	: 500:	480:	460:	:	:	635:	20:b	20:	
Innisfail Ferry	: 820:b	700:	750:	775:	690:	665:	480:	290:	
North San Pablo Bay									
Sonoma Creek Bridge	:	:	:	:a	1385:	:	:	:	
Grandview	: 1740:	:	1660:	:	1640:	:	1300:b	400:	
Vallejo	:b 1270:	:	1210:	:	:	:c	432:	:	
Cuttings Wharf	:a 1320:	:	d 1400:	:	1275:	:	440:	:	
Sacramento River Delta									
Collinsville	: 290:	320:	370:a	245:	222:	293:	96:	21:	
Emmaton	: 110:	:	164:	68:	49:d	88:a	10:a	4:	
Three Mile Slough Bridge	:a 64:	60:	:	:	:	:	:	:	
Rio Vista Bridge	: 22:	18:	19:	5:	3:	3:	1:	2:	
Junction Point	: 5:	:	:	:	:	:	:	:	
Liberty Ferry	:	8:	:	:	:	:	:	:	
Isleton Bridge	: 1:	1:	:	:	:	:	:	:	
R. D. 2068	: 54:	72:a	58:	:	:	:	:	:	
Sacramento	: 1:ab	1:a	1:a	2:	3:ab	1:a	1:	1:	
Mokelumne River Delta									
Southwest Point	: 21:	28:e	63:ae	11:	16:	:	:	:	
Camp 33, Staten Island	: 6:	4:	:	:	:	:	:	:	
Camp 7, Staten Island	:b 16:b	10:	:	:	:	:	:	:	
Camp 11, Staten Island	:b 30:b	26:	21:a	42:e	8:	:	:	:	
Camp 29, Staten Island	: 11:	7:e	6:ae	12:	11:	7:	:	:	
Eagle Tree	:b 48:b	44:	:	:	:	:	:	:	
Camp 25, Staten Island	: 38:	24:	:	:	:	:	:	:	
New Hope Bridge	: 30:	:	44:a	30:	32:	:a	2:	:	
Camp 20, Staten Island	: 51:	43:e	39:ae	44:	44:	40:	:	:	

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 90 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1931
 Samples taken by local observers approximately one and one-half hours
 after high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	DECEMBER (CONTINUED)							
	2	6	10	14	18	22	26	30
San Joaquin River Delta								
Antioch	268:	300:	390:	250:	220:	273:	113:	34:
Curtis Landing	:	237:	239:	173:	164:	161:	104:	:
Jersey	150:	:	a	98:	:	134:	82:	:
Webb Pump	b	102:	94:	92:a	91:	76:	66:	57:
Central Landing	:	20:	34:a	34:	31:	56:	26:a	11:
Dutch Slough	:	:	154:a	138:	:	122:	79:	:
Fard Landing	:	122:	116:	80:a	72:	71:	:	52:
Holland Dam	:	160:	167:a	155:a	147:ab	131:	121:a	89:
Holland Pump	:	177:	150:a	137:a	123:	99:	96:	86:
McDonald Pump	e	84:e	146:de	140:e	117:e	104:e	97:	:
Mandeville Pump	:	165:	150:a	144:a	134:	129:	116:a	97:
King Island Pump	:	:	108:	130:	:	93:	84:	73:
Ridge Pump	:	64:	56:	56:a	48:	28:	33:a	7:
Orwood Bridge	:	130:	128:	119:b	82:	72:	72:	63:a
East Contra Costa I.D.	:	86:	82:	70:a	62:	54:	51:a	43:
Middle River P.O.	:	145:b	124:	110:a	100:	88:	91:	72:
Mansion House	e	94:ab	98:	99:a	98:	128:a	53:	13:
Stockton Country Club	:	:	22:a	22:a	19:	:	18:a	12:
Clifton Court Ferry	:	9:	10:	12:a	9:	10:	9:	8:
Stockton	:	:	:	:	ab	47:a	38:	40:
Garwood Bridge	:	10:	10:	:	:	:	:	:
Mossdale Bridge	:	11:	6:a	8:	:	7:	8:a	8:
Drainage Water Stations								
Jersey Drain	:	77:	:	:	96:	:	90:	83:
Grand Is. Dr. (Steamboat Sl.)	c	24:c	18:	c	14:	:	10:c	15:
Camp 35 Dr. (Staten Is.)	b	43:	38:	46:	24:	48:	:	:
Bacon Island Drain	:	:	42:	33:	53:	60:	45:	50:
Mandeville Drain	:	162:	160:	162:	155:	149:	143:	128:
Camp 11 Dr. (Staten Is.)	b	55:	56:	50:	29:	63:	:	:

- (a) Low high tide.
 (b) Taken on following day
 (c) Taken two days later.
 (d) Over one hour off scheduled time.
 (e) Taken on preceding day.
 (f) Taken two days earlier.

TABLE 74

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1932
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	JANUARY							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1100:	1055:	1040:	1300:	1080:	1360:	1100:	1500:
Point Davis	:	205:	:	570:	680:ab	800:	540:	660:
Bullshead Point	121:	71:	110:	188:	302:b	130:	310:	330:
Bay Point	22:	:	15:	:	286:	:ab	36:	125:
O and A Ferry	13:	11:	10:	8:	11:	7:	9:	7:
Innisfail Ferry	127:	98:	100:	164:	72:	50:	95:	98:
North San Pablo Bay								
Sonoma Creek Bridge	:b 320:	:	137:	:	330:	:	300:	:
Grandview	:	:	320:	:	440:	:	510:	:
Vallejo	:c 146:c	109:c	198:	:b	400:	:	:e	370:
Cuttings Wharf	:	:c 40:	:	:	7:	:	:	:
Sacramento River Delta								
Collinsville	:	9:	6:	8:	9:	6:	6:a	6:
Emmaton	:	:	3:a	4:	4:	:ab	3:a	2:
Sacramento	:	1:	1:	1:	1:	:	2:	1:
Mokelumne River Delta								
Southwest Point	:	:	3:a	3:	5:	5:	5:a	4:
Camp 11 Staten Island	:	:	:ab	3:e	8:e	4:e	3:ae	4:e
Camp 29 Staten Island	:	:	7:a	6:	10:	6:	10:a	6:
New Hope Bridge	:	1:	1:a	1:	1:	1:	1:a	1:
Camp 20 Staten Island	:	:	3:a	2:	2:	:	2:a	2:

a, b, c, d, e, f, See footnotes last page of this table.

: Ant
 : Cur
 : Jer
 : Wel
 : Cer
 : Du
 : Wa
 : Ho
 : Ho
 : Ma
 : Ki
 : Ri
 : Or
 : Ea
 : Mi
 : Ma
 : St
 : Cl
 : St
 : Mo
 : Je
 : Gr
 : Ca
 : Mc
 : Ba
 : Ma
 : Ca

TABLE 74 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1932
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	JANUARY (CONTINUED)							
	2	6	10	14	18	22	26	30
San Joaquin River Delta								
Antioch	21:	13:	11:	13:	8:	10:a	9:	8:
Curtis Landing	29:ab	16:a	14:	:	12:	12:	8:	9:
Jersey	33:	:	:	:	13:	13:a	12:ab	11:
Webb Pump	47:	21:	16:	16:	13:	11:	12:	10:
Central Landing	9:	2:a	3:	3:	4:	4:a	3:	2:
Dutch Slough	:	:	:	:	:	21:a	20:	19:
Ward Landing	18:	13:	11:	10:	11:	11:	10:	10:
Holland Pump	27:	17:a	15:	12:	21:	9:a	10:	9:
Holland Dam	61:	42:a	33:	32:	29:	20:ab	18:	18:
Mandeville Pump	39:	24:a	16:	15:	13:	12:a	13:	12:
King Island Pump	43:	24:	24:	27:	28:	13:	13:	15:
Rindge Pump	5:	6:	4:	6:	7:	8:a	5:	6:
Orwood Bridge	19:c	9:	7:b	5:	6:	7:	6:	6:
East Contra Costa I.D.	32:	29:a	16:	19:	16:	a	13:	21:
Middle River P.O.	27:	10:	5:	9:	10:	6:a	8:	:
Mansion House	15:	a	6:	6:	5:	8:a	5:	3:
Stockton Country Club	5:	3:a	3:	3:	5:	4:a	4:	3:
Clifton Court Ferry	ab	5:	3:	2:	3:	2:a	4:	1:
Stockton	39:	39:	34:	:	29:	30:	29:	:
Mossdale Bridge	2:	2:ab	3:	2:	2:	3:a	1:	1:
Drainage Water Stations								
Jersey Drain	104:	:	:	:	93:	86:	77:b	75:
Grand Island Dr.(Steamboat)	e 15:	e 11:	e 15:	e 18:	e 16:	e 20:	e 24:	35:
Camp 35 Drain (Staten Is.)	:	41:	32:	:	31:	69:	49:	32:
McDonald Drain	:	:	:	:	:	:	:	68:
Bacon Island Drain	49:	43:	45:	39:	36:	32:	36:	33:
Mandeville Drain	107:	99:	95:	95:	93:	91:	89:	85:
Camp 11 Drain (Staten Is.)	:	25:	24:	:	23:	24:	15:	22:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 74 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1932
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	FEBRUARY						
	2	6	10	14	18	22	26
San Francisco, San Pablo and Suisun Bays							
Point Orient	1260:	:	870:	1080:	1380:	1220:	1300:
Point Davis	:	:	:	:	800:	630:	620:
Bulls Head Point	500:	320:	40:a	100:	640:ab	160:	270:
Bay Point	90:	90:a	7:	5:e	220:	80:a	16:
O and A Ferry	ab 9:	7:	3:	5:	5:	4:a	4:
Innisfail Ferry	54:	62:a	200:	150:	110:	100:	66:
North San Pablo Bay							
Sonoma Creek Bridge	480:	:	260:	:	270:	:	450:
Grandview	630:	:	370:	:	460:	a	440:
Vallejo	:	330:ae	250:	a	550:	c	430:
Cuttings Wharf	130:	:	9:	:	270:	:	130:
Sacramento River Delta							
Collinsville	6:	4:	3:	11:	3:	2:	4:
Emmaton	8:a	4:a	1:	:	3:	2:	2:
Sacramento	1:	1:	1:	1:	1:	1:	1:
Mokelumne River Delta							
Southwest Point	:	:	:	:	2:	:	:
Camp 33 Staten Island:	:	:	:	e	4:	:	:
Camp 7 Staten Island:	:	:	:	:	2:	:	:
Camp 11 Staten Island:	:	:	:	:	2:	:	:
Camp 29 Staten Island:	:	:	:	e	5:	:	:
Eagle Tree	:	:	:	:	1:	:	:
Camp 25 Staten Island:	:	:	:	e	5:	:	:
New Hope Bridge	:	:	:	:	1:	:	:
Camp 20 Staten Island:	:	:	:	e	1:	:	:
San Joaquin River Delta							
Antioch	7:	7:	6:	5:	5:	5:	5:
Jersey	9:	8:	6:	6:	6:	6:a	5:
Webb Pump	10:	9:	8:	:	:	:	:
Central Landing	2:	2:	4:	4:	3:	:	:
Zuckerman Pump	3:	3:	3:	:	:	:	:
Rindge Pump	4:	5:	1:	5:	1:a	3:	4:
Middle River P.O.	9:	5:	8:	3:	1:	2:	2:
Stockton	a 24:	26:	32:a	20:	34:	18:	29:
Mossdale Bridge	1:	1:	1:	1:	1:	:	:
Drainage Water Stations							
Jersey Drain	106:	94:	103:	98:	97:	186:	87:
Grand Is. Dr. (Steamboat)	15:	15:	17:	26:	17:	21:	28:
Camp 35 Dr. Staten Is.	47:	50:	51:	62:	64:	60:	58:
Bacon Island Drain	29:	37:	36:	54:	30:	29:	28:
Mandeville Drain	81:	78:	67:	66:	65:	:	67:
Camp 11 Dr. Staten Is.	49:	49:	36:	82:	83:	76:	78:
McDonald Dr. (Henning)	31:	39:	28:	:	:	:	:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 74 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1932
 Samples taken by local observers approximately one and one-half hours
 after high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	MARCH							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1220:	1320:	1300:	1320:	1240:b	1320:	1280:	1220:
Point Davis	670:	650:	640:	720:	660:b	640:	700:a	620:
Bulls Head Point	260:	240:	180:	350:	270:	:	100:ab	110:
Bay Point	76:	:a	16:	66:	:b	12:a	6:	:
O and A Ferry	6:	4:	:	2:	2:a	2:	1:	3:
Innisfail Ferry	76:	76:	101:	56:	108:	84:	82:	90:
North San Pablo Bay								
Sonoma Creek Bridge	510:	:a	440:	:	660:	:	:	:
Grandview	670:	:a	620:	:	690:	:	860:	:
Collejo	b 410:	:ae	420:	:	520:	:a	90:	:
Clattings Wharf	300:	:	120:	:	360:	:	210:a	290:
Sacramento River Delta								
Collinsville	3:	3:	2:	1:	2:a	2:	1:	1:
Emmaton	:	1:	2:	:	1:a	1:	:	2:
Sacramento	1:a	1:	1:	1:	1:b	1:	1:	1:
San Joaquin River Delta								
Antioch	4:	3:	4:	3:	4:a	2:	2:	3:
Jersey	6:	5:	:	4:	4:b	3:a	3:	:
Central Landing	3:	2:	1:	1:	2:	:	2:	1:
Rindge Pump	4:	2:	4:	4:	5:b	5:	4:	8:
Middle River P.O.	7:ab	5:	3:	:	5:b	2:	6:	6:
Stockton	:	47:	37:	47:	46:b	41:	39:	:
Mossdale Bridge	2:	1:	4:	3:	3:b	2:	6:	6:
Drainage Water Stations								
Jersey Drain	72:	69:	:	61:	76:b	88:	79:	:
Grand Is. Dr. (Steamboat)	e 15:e	15:	11:e	10:e	18:e	11:e	8:e	8:
Camp 35 Drain (Staten Is.)	65:	52:	62:	50:	50:	46:	58:	53:
Bacon Island Drain	20:	22:	26:	19:	21:	24:	16:	24:
Mandeville Drain	58:	55:	48:	40:	40:	38:	36:	34:
Camp 11 Drain (Staten Is.)	84:	71:	77:	48:	72:	58:	89:	81:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 74 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1932
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	APRIL								
	2	6	10	14	18	22	26	30	
San Francisco, San Pablo and Suisun Bays									
Point Orient	:b 1160:	b 1020:		1240:	b 1360:	b 1400:	1240:	1220:	
Point Davis	:	:b 520:	420:		:ae 680:	:		:b 760:	
Bulls Head Point	:b 120:	120:	130:	152:	238:	380:	160:	a 220:	
Bay Point	:a 30:	a 4:		26:	a 14:	a 20:	a 9:		
O and A Ferry	:ab 2:	a 1:	4:	4:	a 1:	3:	2:	b 2:	
Innisfail Ferry	:a 70:	a 66:	b 56:		:a 62:	a 45:	34:	a 51:	
North San Pablo Bay									
Sonoma Creek Bridge	:a 710:		360:		:a 650:		800:		
Grandview	:b 760:		680:		:a 760:		a 880:		
Vallejo	:b 300:		:ae 330:		:		:ab 280:		
Cuttings Wharf	:b 250:		160:		:ab 180:		290:		
Sacramento River Delta									
Collinsville	:a 2:	a 1:	1:	a 1:	a 1:	a 1:	2:	1:	
Emmaton	:a 1:				1:	a 1:	1:	1:	a 1:
Sacramento	:ab 1:	b 1:	1:	1:	1:	b 1:	1:	1:	a 1:
San Joaquin River Delta									
Antioch	:a 2:	a 2:	1:	3:	a 3:	a 3:	3:	3:	a 2:
Jersey	:	:	:a 3:	3:	b 3:	4:		3:	
Central Landing	:a 1:	a 1:	3:	3:	a 2:			2:	
Rindge Pump	:b 6:	b 6:	6:	6:	b 4:	b 3:	3:	2:	a 3:
Middle River P.O.	:b 5:	b 4:	ab 6:	6:	a 5:	b 2:	2:	2:	
Mossdale Bridge	:a 4:	b 2:	a 1:	3:	b 1:	ab 1:	1:	1:	1:
Drainage Water Stations									
Jersey Drain	:	:	55:	40:	b 81:		50:		
Grand Is. Dr. (Steamboat)	: 9:	9:	9:	8:	16:	9:	7:	7:	
Camp 35 Dr. (Staten Is.)	:	52:	14:		19:	16:	25:		
Bacon Island Drain	: 9:	9:	8:	12:	6:	4:	5:	5:	
Mandeville Drain	: 30:	28:	24:	25:	25:	22:	17:	15:	
Camp 11 Dr. (Staten Is.)	:	83:	76:		46:	51:	51:		

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 74 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1932
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	MAY								
	2	6	10	14	18	22	26	30	
San Francisco, San Pablo and Suisun Bays									
Point Orient	:b	980:b	1220:	920:	840:	:b	880:	940:	1020:
Point Davis	:	:b	760:	330:a	340:b	470:c	265:	540:	340:
Bulls Head Point	:	380:	340:	80:a	100:	100:	50:	:b	296:
Bay Point	:ab	22:a	9:a	2:a	2:	:ab	3:a	2:a	3:
O and A Ferry	:	:a	1:	2:a	1:ab	1:b	2:	1:b	1:
Innisfail Ferry	:	54:a	50:a	54:a	47:a	35:	:a	31:a	30:
North San Pablo Bay									
Sonoma Creek Bridge	:	780:	:	:	:a	400:	:	:	460:
Grandview	:a	820:	:a	760:	:a	660:	:	600:	:
Telejo	:	:ae	280:ae	180:	:ab	60:	:ac	244:	:
Stings Wharf	:b	320:	:	330:	:ab	270:	:	190:	:
Sacramento River Delta									
Collinsville	:a	1:a	1:	1:a	1:	:a	1:a	1:	1:
Ermaton	:a	1:	:	1:a	1:a	1:b	1:	:	:
Sacramento	:b	1:b	1:	1:ab	1:b	1:b	1:b	1:b	1:
San Joaquin River Delta									
Antioch	:a	3:a	3:	1:a	2:a	2:a	2:a	1:a	1:
Jersey	:a	4:	:	2:a	2:a	1:	1:a	1:a	1:
Central Landing	:a	1:b	2:	2:a	1:a	1:b	1:a	1:a	1:
Rindge Pump	:b	5:b	4:	2:a	2:b	1:b	1:	:a	1:
Middle River P.O.	:a	3:b	2:ab	4:	:	:b	3:	:	:
Mossdale Bridge	:	:b	2:	1:a	1:b	1:	:a	1:b	1:
Drainage Water Stations									
Jersey Drain	:	39:	:	47:	9:	22:b	40:	34:	27:
Grand Is. Dr. (Steamboat)	:c	14:c	7:	:c	11:c	6:c	30:c	9:	:
Camp 35 Dr. (Staten Is.)	:	20:	24:	21:	5:	2:	2:b	7:	6:
Bacon Island Drain	:	4:	5:	5:	4:	3:	2:	1:	1:
Mandeville Drain	:	16:	15:	14:	13:	15:	14:	11:	9:
Camp 11 Drain (Staten Is.)	:	43:	48:	47:	12:	7:	3:	7:	1:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 74 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1932
 Samples taken by local observers approximately one and one-half hours
 after high tide.

Salinity expressed in parts of chlorine per 100,000 parts of water

Station	JUNE								
	2	6	10	14	18	22	26	30	
San Francisco, San Pablo and Suisun Bays									
Point Orient		:b 1180:	1120:	1240:	b 1240:	1140:	1100:	1260:	
Point Davis	:b	480:a	540:		880:b	660:	580:a	440:	720:
Bulls Head Point	:b	160:b	80:	76:	450:b	380:	130:	240:a	120:
Bay Point	:a	3:a	4:a	6:a	9:		b 8:a	7:a	10:
O and A Ferry	:b	2:b	2:	1:	1:b	6:a	1:	2:b	3:
Innisfail Ferry	:a	28:a	25:a	27:a	26:a	26:a	21:a	21:a	22:
North San Pablo Bay									
Sonoma Creek Bridge	:b	620:		460:		b 400:		520:	
Grandview	:a	620:		a 700:		b 740:		700:	
Vallejo	:ab	190:		a 330:	490:	b 360:		340:	
Cuttings Wharf	:b	220:		280:		b 240:		320:	
Sacramento River Delta									
Collinsville		:a	1:a	1:a	1:a	1:a	1:a	1:a	1:
Ermaton		:a	2:		a 1:a	1:		b 1:a	1:
Sacramento	:b	1:b	1:a	1:	1:b	1:	1:a	1:a	1:
San Joaquin River Delta									
Antioch	:a	1:a	1:a	1:a	2:a	1:	2:a	1:a	1:
Jersey		:b	1:a	1:a	2:a	1:	1:a	1:a	1:
Central Landing	:a	1:a	2:a	1:a	1:a	1:	1:ab	1:a	1:
Ridge Pump	:b	1:b	1:a	2:a	1:b	1:	1:a	1:a	1:
Middle River P.O.		:b	1:a	2:a	2:a	1:	1:a	1:a	1:
Stockton	:b	53:b	54:				62:b	71:b	71:
Mossdale Bridge	:b	1:b	1:a	1:a	1:b	1:	a	1:	
Drainage Water Stations									
Jersey Drain		:b	28:	30:	16:	17:	19:	11:	
Grand Is. Dr. (Steamboat)	:e	11:e	8:e	8:e	6:e	9:e	8:e	12:e	9:
Camp 35 Dr. (Staten Is.)		4:	7:	3:	3:	5:	2:	1:	4:
Bacon Island Drain		1:	2:	2:	3:	1:	1:	3:	2:
Mandeville Drain		12:	9:	9:	6:	5:	5:	3:	4:
Camp 11 Drain (Staten Is.)		7:	7:	8:	3:	3:	1:	2:	1:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 74 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1932

Samples taken by local observers approximately one and one-half hours
after high high tide.

Salinity expressed in parts of chlorine per 100,000 parts of water

Station	JULY								
	2	6	10	14	18	22	26	30	
San Francisco, San Pablo and Suisun Bays									
: Point Orient	:b	350:b	1180:	1280:	1360:b	1480:	:	1500:	1500:
: Point Davis	:b	600:b	660:	700:	940:	940:	980:	:	b 1180:
: Bulls Head Point	:b	210:b	280:	300:b	630:b	670:	580:	780:	920:
: Bay Point	:	a	24:ab	47:a	134:a	300:	320:a	265:a	510:
: O and A Ferry	:e	3:b	3:	14:b	54:b	54:	59:	162:	280:
: Innisfail Ferry	:	23:b	19:	16:a	24:a	30:a	44:	76:a	84:
North San Pablo Bay									
: Sonoma Creek Bridge	:b	480:	:	600:	a	760:	:	800:	:
: Grandview	:b	620:	:	620:	a	900:	:	880:	:
: Vallejo	:	400:	:	:	:	:	b	900:	:
: Cuttings Wharf	:ab	350:	:	380:	b	550:	:	540:	:
Sacramento River Delta									
: Collinsville	:a	1:b	1:a	1:a	2:a	6:	24:	a	41:
: Emmaton	:a	1:	:	:	a	1:	2:	2:a	2:
: Three Mile Slough Bridge:	:	:	:	:	:	:	2:	1:b	3:
: Rio Vista Bridge	:	:	:	:	:	:	1:ab	3:b	3:
: Sacramento	:b	1:b	1:a	1:b	1:b	2:a	1:a	1:b	2:
San Joaquin River Delta									
: Antioch	:a	1:a	1:	2:a	2:a	6:	14:	10:a	32:
: Curtis Landing	:	:	:	:	:	:	a	4:b	27:
: Jersey	:	b	1:a	1:	:	a	2:a	2:	:
: Webb Pump	:	:	:	:	:	:	3:b	2:b	1:
: Central Landing	:a	1:a	1:a	1:a	2:a	3:a	3:a	3:a	1:
: Holland Pump	:	:	:	:	:	:	2:b	2:b	3:
: Mandeville Pump	:	:	:	:	:	:	a	2:a	3:
: Rindge Pump	:b	1:b	1:a	4:a	4:b	6:	a	8:a	7:
: Middle River P.O.	:	b	1:a	1:a	2:b	2:	:	:	:
: Stockton	:b	64:a	72:a	71:	:	:	:	:	68:
: Mossdale Bridge	:b	1:b	1:	:	2:b	2:	a	5:a	7:
Drainage Water Stations									
: Jersey Drain	:	b	18:	20:	:	:	18:	9:	:
: Grand Is. Dr. (Steamboat):	b	4:b	6:b	7:b	5:b	5:b	7:b	8:	:
: Camp 35 Drain (Staten Is.)	:	7:	9:	3:	3:	:	3:	5:	4:
: Bacon Island Drain	:	2:	1:	2:	2:	3:	3:	:	2:
: Mandeville Drain	:	:	4:	3:	4:	5:	4:	5:	3:
: Camp 11 Dr. (Staten Is.):	:	2:	1:b	2:	3:	:	2:	3:	2:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 74 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1932
 Samples taken by local observers approximately one and one-half hours
 after high high tide.

Salinity expressed in parts of chlorine per 100,000 parts of water

Station	AUGUST								
	2	6	10	14	18	22	26	30	
San Francisco, San Pablo and Suisun Bays									
Point Orient	:b 1580:	1620:	1620:	b 1540:	1580:	1520:	1600:		
Point Davis	:b 1120:	1300:	1240:	a 1320:	1160:	a 1100:	a 1360:	b 1400:	
Bulls Head Point	:b 860:	940:	1120:	b 1040:	800:	1000:	1180:	b 1040:	
Bay Point	:ab 540:	640:	a 420:	a 680:		a 640:	a 780:	a 820:	
O and A Ferry	:b 200:	360:	370:	b 410:	a 280:	440:	580:	b 500:	
Innisfail Ferry	:a 168:	234:	380:	a 330:		430:	a 400:	a 440:	
North San Pablo Bay									
Sonoma Creek Bridge	:b 900:		1060:		1020:		1160:		
Grandview	:a 920:		1120:		a 1120:		1140:		
Vallejo	:	960:	b 1000:		b 1040:		1120:		
Cuttings Wharf	:b 540:	590:					800:		
Sacramento River Delta									
Collinsville	:	92:a	144:		ab 150:	a 180:	a 230:	a 380:	a 320:
Emmaton	:a	4:	12:			40:	52:a	46:a	70:
Three Mile Slough Bridge	:b	5:a	6:	13:a	18:		a 17:	b 37:	a 46:
Rio Vista Bridge	:b	2:	4:b	4:b	4:	4:	4:b	7:b	7:
Sacramento	:b	4:a	3:a	6:b	3:	3:a	4:b	4:b	3:
San Joaquin River Delta									
Antioch	:a	52:	104:a	38:a	134:	190:a	140:a	210:a	250:
Curtis Landing	:a	24:a	45:a	26:a	60:a	78:	127:a	150:a	130:
Jersey	:b	21:a	12:		b 59:	a 29:	a 29:	45:	
Webb Pump	:b	3:	2:b	8:b	8:	6:	10:b	15:b	16:
Central Landing	:a	3:a	3:b	3:b	2:		a 4:	a 5:	6:
Dutch Slough	:	:	:	:	:	:	10:b	7:b	10:
Holland Pump	:b	3:	2:a	2:			a 5:	a 4:	5:
Mandeville Pump	:b	4:a	4:a	3:b	4:		a 6:	a 5:	5:
Rindge Pump	:b	8:a	10:a	15:b	10:		a 15:		
Middle River P.O.	:b	3:		a 5:	b 7:		a 6:	a 6:	bd 7:
Stockton	:	:	:	:	:	66:b	60:		64:
Mossdale Bridge	:b	9:a	9:a	14:b	10:		a 12:	a 10:	b 9:
Drainage Water Stations									
Jersey Drain	:b	12:	14:		b 15:	19:	19:	22:	
Grand Is. Dr. (Steamboat)	:e	6:e	7:e	9:e	4:e	5:e	9:e	9:e	8:
Camp 35 Drain (Staten Is.)	:	5:	4:	7:	5:	4:	7:	4:	7:
Bacon Island Drain	:	4:	4:	3:			5:	5:	7:
Mandeville Drain	:b	4:	3:	5:b	4:		5:	5:b	6:
Camp-11 Drain (Staten Is.)	:	1:	4:	5:	3:	6:	3:	4:	2:
McDonald Drain (Henning)	:		2:	2:	6:				

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 74 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1932
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	SEPTEMBER							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	a 1700:	1680:	1660:b	1720:	1720:	1620:	1660:	1680:
Point Davis	:	1360:a	1360:	1520:	:	1440:	1440:a	1420:
Bulls Head Point	:	1080:	1180:	1320:a	1020:	1200:	1120:b	1180:
Bay Point	:	880:a	800:a	940:a	880:	960:a	760:a	880:
C and A Ferry	:	580:	560:a	520:a	600:	580:	560:b	620:
Innisfail Ferry	:	520:	540:	600:a	560:	620:a	600:a	660:
North San Pablo Bay								
Sonoma Creek Bridge	:	1280:	:	a 1320:	:	1300:	:	1380:
Grandview	:	1200:	:	1260:	:	1340:	:	1340:
Vallejo	:	:	:	ab1220:	ac1300:	:	:	1200:
Cuttings Wharf	:	960:	:	1040:	:	960:	:	b 1120:
Sacramento River Delta								
Collinsville	:	300:	500:a	400:a	360:a	440:a	320:a	320:
Maton	:	108:	144:a	120:	:	166:	114:a	84:
Three Mile Slough Br.	:	59:a	50:a	90:b	74:	84:	64:a	50:
Rio Vista Bridge	:	7:d	20:b	28:b	28:	14:	10:b	12:
Junction Point	:	:	:	:	:	7:	6:a	4:
Isleton Bridge	:	:	:	:	:	6:	3:b	3:ab
Sacramento	:	ab 5:a	3:b	4:b	4:a	3:a	1:b	2:
San Joaquin River Delta								
Antioch	:	290:a	270:a	320:a	350:	400:	360:a	310:a
Curtis Landing	:	200:a	170:a	260:	:	280:a	160:a	200:
Jersey	:	89:a	68:	:	b 120:	:	a 60:	:
Webb Pump	:	18:	28:b	30:b	30:	35:a	23:b	26:
Central Landing	:	6:a	7:a	8:a	6:a	8:a	8:	:
Dutch Slough	:	11:	24:b	17:b	22:	37:	26:b	16:
Holland Pump	:	6:a	6:b	7:b	7:	8:a	7:a	10:
Mandeville Pump	:	:	a 8:a	10:b	8:	11:	10:	11:
Rindge Pump	:	ab 14:a	16:a	14:b	16:a	15:a	16:a	13:
Middle River P.O.	:	7:	12:a	9:b	8:	:	a 11:a	11:
Stockton	:	:	ab 56:b	64:	:	58:b	50:b	58:
Mossdale Bridge	:	ab 10:	:	a 9:b	9:	:	a 6:a	7:
Drainage Water Stations								
Jersey Drain	:	31:	38:	:	b 39:	:	51:	:
Grand Is. Dr. (Steamboat)	:	5:	10:	7:	9:	8:	8:	11:
Camp 35 Dr. (Staten Is.)	:	7:	4:	7:	11:	11:	8:	9:
Accon Island Drain	:	6:	8:	8:b	9:	8:f	10:	9:
Mandeville Drain	:	:	7:	:	b 10:	10:	9:	11:
Camp 11 Dr. (Staten Is.)	:	2:	3:	3:b	3:	3:	6:	5:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 74 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1932
 Samples taken by local observers approximately one and one-half hours
 after high high tide.

Salinity expressed in parts of chlorine per 100,000 parts of water

Station	OCTOBER							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1680:	1680:	1640:	1680:	1640:	1660:	:	:
Point Davis	1500:	1360:	1280:	1340:	:	1280:	:	1340:
Bullshhead Point	1200:	1180:	880:	1040:a	980:	1060:a	1020:	1200:
Bay Point	1010:a	860:	800:ab	800:	780:ad	820:	820:	880:
O and A Ferry	600:	520:	480:	540:	440:a	390:	520:a	540:
Innisfail Ferry	660:a	640:	680:	620:	660:	620:	:	640:
North San Pablo Bay								
Sonoma Creek Bridge	1320:	:	1320:	:	1420:	:	:	:
Grandview	1340:	:	1360:	:	1460:	:	1420:	:
Vallejo	:	d 1180:	:	:	bd1120:	:	c 1180:	:
Cuttings Wharf	:	:	:	:	1160:	:	1160:	:
Sacramento River Delta								
Collinsville	a 390:a	300:	270:	320:a	320:a	270:	:	330:
Emmaton	128:a	76:	56:	82:	28:a	42:	34:	51:
Three Mile Slough Br.	a 48:a	37:	40:	39:a	17:a	22:	:	41:
Rio Vista Bridge	9:	13:	3:	4:	2:	2:	:	2:
Junction Point	5:a	4:	3:	3:	2:a	2:	:	1:
Isleton Bridge	3:	3:a	3:	2:	1:	2:a	1:	1:
Sacramento	1:a	1:	:	a	1:a	1:a	1:a	1:
San Joaquin River Delta								
Antioch	350:	290:	280:	280:	270:	:	:	320:
Curtis Landing	a 150:a	200:a	116:	176:	176:a	128:	92:	156:
Jersey	150:a	66:	62:ab	56:	a	57:ab	60:a	39:
Webb Pump	31:	24:	16:	:	:	:	13:	13:
Central Landing	:	:	4:	a	2:a	1:	5:a	4:
Dutch Slough	26:	22:	22:	:	20:	22:	:	16:
Holland Pump	10:a	10:	10:	11:	11:a	11:	10:	9:
Mandeville Pump	a	12:	11:	18:a	13:a	11:	12:a	11:
Rindge Pump	a 15:a	15:a	14:	14:a	13:a	13:	:	10:
Middle River P.O.	12:a	10:	11:ab	11:a	11:a	11:	:	12:
Stockton	:	b 52:	64:	70:	:	:	:	:
Mossdale Bridge	a	9:	7:	7:a	9:a	2:	a	4:
Drainage Water Stations								
Jersey Drain	48:	41:	39:	41:	:	42:	54:	56:
Grand Is. Dr. (Steamboat)	f	10:f	10:f	6:f	7:f	21:f	14:f	14:
Camp 35 Dr. (Staten Is.)	7:	:	6:	5:	8:	7:	5:	7:
Bacon Island Drain	10:	10:	11:	11:	13:	:	14:	11:
Mandeville Drain	:	11:	12:	13:	13:	13:	13:	14:
Camp 11 Dr. (Staten Is.)	7:	3:	1:	7:	8:	7:	7:	7:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 74 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1932

Samples taken by local observers approximately one and one-half hours
after high high tide

Salinity expressed in parts of chlorine per 100,000 parts of water

Station	NOVEMBER								
	2	6	10	14	18	22	26	30	
San Francisco, San Pablo and Suisun Bays									
Point Orient	1700:	1660:	1620:	1640:	1640:	1500:	1640:	1640:	
Point Davis	1380:	1240:	1260:	:	1160:	1340:	1460:	1300:	
Bullshead Point	1200:	960:	1080:a	940:	1020:	860:	1040:	1140:	
Bay Point	a 760:	760:	800:	780:	680:	800:	880:	:	
O and A Ferry	:	440:	340:	360:	370:a	340:	420:ab	390:a	320:
Innisfail Ferry	:	620:	600:	540:	580:	500:	540:	540:	560:
North San Pablo Bay									
Sonoma Creek Bridge	1340:	:	1320:	:	1280:	:	1280:	:	
Grandview	1420:	:	1420:	:	1460:	:	1460:	:	
Vallejo	:	1100:	1140:a	1040:	:	1100:b	1140:	1080:	
Cuttings Wharf	1160:	:	1140:	:	1100:	:	1100:	:	
Sacramento River Delta									
Collinsville	350:	:	:	220:a	160:	210:	290:	350:	
Emmaton	40:	33:	19:	30:a	11:	12:	48:	78:	
Three Mile Slough Br.	42:	11:	13:a	12:	8:ab	7:	19:a	13:	
Delio Vista Bridge	3:ab	2:	1:	1:	1:	1:	1:	1:	
Junction Point	a 1:	:	:	:	:	:	:	:	
Isleton Bridge	:	1:	:	:	:	:	:	:	
Sacramento	a 1:	1:	1:a	1:a	1:	1:a	1:a	1:	
San Joaquin River Delta									
Antioch	d 230	:ab 110:	172:	190:	190:	200:	260:	160:	
Curtis Landing	a 80:	80:	58:	100:a	52:	68:	132:a	70:	
Jersey	a 30:	:	35:a	15:a	30:	:	:	:	
Webb Pump	:	14:	11:	10:	9:	9:	8:	12:	
Central Landing	:	:	4:	3:a	3:a	4:	7:a	3:a	4:
Dutch Slough	a 15:abd	9:	:	15:a	12:	12:b	11:ad	11:	
Holland Pump	:	9:	6:	8:	7:	7:	8:	6:	6:
Mandeville Pump	:	:	10:	9:a	8:a	9:	8:	8:a	8:
Rindge Pump	a 7:	6:	6:a	6:a	6:	8:	7:a	9:	
Middle River P.O.	a 9:	8:a	7:a	6:a	6:	6:	6:a	6:	
Stockton	:	37:a	31:ab	46:	37:	40:	42:	41:	38:
Mossdale Bridge	a 3:	4:	:	a 5:a	5:	5:	5:a	6:	
Drainage Water Stations									
Jersey Drain	:	47:	:	40:	47:	35:	:	:	
Grand Is. Dr. (Stearboat)	e 19:	:	e 25:	e 8:	e 4:	e 8:	e 6:	e 4:	
Camp 35 Drain (Staten Is.)	:	7:	13:	14:	5:	5:	9:	16:	15:
Bacon Island Drain	:	10:	10:	10:	10:	7:	9:	8:	10:
Mandeville Drain	:	:	14:	16:	16:	17:	16:	15:	14:
Camp 11 Dr. (Staten Is.)	:	9:	9:	14:	11:	20:	20:	17:	20:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 74 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1932
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	DECEMBER							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1580:	1680:	1560:		1520:	1420:	1700:	1560:
Point Davis	1180:	1260:	1360:	1300:		1200:	1200:	
Bullshead Point	1000:	1060:	a 980:	900:	b 800:	920:	ab 820:	
Bay Point	a 700:	800:	760:	780:	a 640:	720:	660:	600:
O and A Ferry	380:	320:	380:	500:	360:	370:	350:	320:
Innisfail Ferry *	a 560:	b 540:	560:	540:	a 540:	a 520:	420:	a 440:
North San Pablo Bay								
Sonoma Creek Bridge		1260:	1260:		1220:			a 1080:
Grandview	1380:		1420:		1360:		1280:	
Vallejo				b 980:	b 1020:			
Cuttings Wharf	1120:		1080:		1020:		1020:	
Sacramento River Delta								
Collinsville	280:		260:	300:	a 150:	170:	124:	108:
Emmaton	36:	11:	10:	10:	14:		4:	4:
Three Mile Slough Br.	a 14:	ab 5:	6:	8:	5:	5:	ab 3:	a 3:
Rio Vista Bridge	1:	1:	1:	a 1:	1:	a 1:	1:	1:
Sacramento	a 1:	1:	ab 1:	a 1:	1:	1:	ab 1:	a 1:
San Joaquin River Delta								
Antioch	190:	170:	180:	190:	120:	110:	96:	68:
Curtis Landing	a 62:	34:	62:	a 74:	43:	43:	19:	19:
Jersey	36:		52:	24:			29:	a 6:
Webb Pump	8:	8:	8:	7:	6:	6:		
Central Landing		2:		4:	1:		4:	2:
Dutch Slough			15:	11:	9:	11:	9:	10:
Holland Pump	7:	8:	7:	8:	a 9:	8:	8:	a 8:
Mandeville Pump			13:	a 11:	9:	8:	8:	a 8:
Rindge Pump	a 12:	11:	11:	a 12:	13:	13:	11:	a 11:
Middle River P.O.		7:	8:	7:	a 8:	8:	a 10:	
Stockton	80:			40:	a 41:	b 40:	a 34:	33:
Mossdale Bridge	a 6:	6:	a 7:	7:	7:		5:	a 4:
Drainage Water Stations								
Jersey Drain	35:		29:	27:			46:	13:
Grand Is. Dr. (Steamboat)	b 7:	b 23:	b 15:	b 12:	6:	b 6:	b 6:	4:
Camp 35 Dr. (Staten Is.)	17:	20:	15:	12:	12:	10:	17:	18:
Bacon Island Drain	10:	13:	12:	11:	10:	16:	13:	13:
Mandeville Drain			14:	14:	11:	15:	15:	14:
Camp 11 Dr. (Staten Is.)	18:	13:		17:	17:	15:	20:	23:

TABLE 75

(a) Low high tide. (d) Over one hour off scheduled time.
 (b) Taken on following day. (e) Taken on preceding day.
 (c) Taken two days later. (f) Taken two days earlier.
 *Samples during December taken one mile east of Innisfail Ferry. At Alexander Kellogg Ranch Headquarters.

TABLE 143

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1933
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	JANUARY							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1560:	1440:	1500:	1460:	1460:	1520:	1360:	1320:
Point Davis	:	:	1160:	1200:	1120:	1160:	1020:	880:
Bulls Head Point	880:	880:a	480:	820:	840:a	480:	540:	460:
Bay Point	540:	540:	600:	580:a	380:	580:	480:	240:
O and A Ferry	138:	230:	230:	260:a	130:	310:	130:	12:
Innisfail Ferry	420:a	500:	380:	380:	340:	340:	340:	320:
North San Pablo Bay								
Sonoma Creek Bridge	1120:	:	1040:	:	1040:	:	980:	:
Grandview	1260:	:	1100:	:	1100:	:	1080:	:
Allejo	:	:	c 880:c	1100:	1100:	900:bd	820:	:
Puttings Wharf	980:	:	920:	:	860:	:	122:	:
Sacramento River Delta								
Collinsville	62:	90:	116:	116:	44:	103:	38:	12:
Emmaton	4:	2:	3:	:	3:	2:	2:	1:
Sacramento	1:	2:	1:	1:	1:	1:a	1:	1:
San Joaquin River Delta								
Antioch	42:	34:	49:	32:	53:	72:	32:	12:
Jersey	:	:	9:	9:	7:	16:a	8:	6:
Central Landing	:	4:	3:	3:	4:	4:	4:	3:
Rindge Pump	10:	10:	10:	10:a	10:	12:	12:	7:
Middle River P. O.	ab 8:a	9:	8:	7:a	9:a	9:	9:	11:
Stockton	20:a	20:	20:a	32:	:	:	:	27:
Mossdale Bridge	3:	5:	5:ab	4:	7:	6:a	9:	4:
Drainage Water Stations								
Jersey Drain	:	:	39:	45:	46:	52:	61:	66:
Grand Is. Dr. (Steamboat):c	6:c	4:c	6:c	7:c	6:	10:	7:	:
Camp 35 Dr. (Staten Is.):	21:	24:	27:	27:	6:	33:	28:	30:
Bacon Island Drain	12:	12:	11:	11:	11:	15:	16:	16:
Mandeville Drain	:	16:	18:	16:	17:	19:	21:	25:
Camp 11 Dr. (Staten Is.):	25:	34:	33:	33:	17:	44:	30:	36:

a, b, c, d, e, c, See footnotes last page of this table.

TABLE 143 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1933
 Samples taken by local observers approximately one and one-half hours
 after high high tide.

Salinity expressed in parts of chlorine per 100,000 parts of water

Station	FEBRUARY						
	2	6	10	14	18	22	26
San Francisco, San Pablo and Suisun Bays							
: Point Orient	: 1160:	: 1300:	: 1300:	: 1320:	: 1300:	:	: 1140:
: Point Davis	:	: 1020:	:	: 840:	: 940:	: 780:	: 720:
: Bulls Head Point	: 500:a	: 280:ab	: 230:	: 420:	: 540:a	: 138:	: 500:
: Bay Point	: 130:	: 270:	: 262:	:a	: 42:	: 260:	: 140:
: O and A Ferry	: 31:	: 19:	: 25:	: 22:	: 17:	: 11:	: 23:
: Innisfail Ferry	: 126:	: 146:	: 180:	: 184:a	: 246:	: 138:	: 152:
North San Pablo Bay							
: Sonoma Creek Bridge	: 620:	:	: 580:	:	: 600:	:	: 700:
: Grandview	: 920:	:	: 760:	:	: 780:	:	: 880:
: Vallejo	: 580:	:	: 660:	:	:b	: 520:b	: 590:
: Cuttings Wharf	: 33:	:	: 420:	:	: 120:	:	: 410:
Sacramento River Delta							
: Collinsville	: 4:	: 3:	:	: 5:a	: 4:	: 10:	: 5:
: Emmaton	: 4:	: 1:	: 2:	: 2:	: 2:	: 2:	:
: Sacramento	:	: 1:	: 1:	: 1:	: 1:	: 1:	: 1:
San Joaquin River Delta							
: Antioch	: 5:	: 4:	: 6:	: 6:	: 8:	: 8:	: 8:
: Jersey	: 8:	: 7:	: 7:	: 6:	: 8:	:	:
: Central Landing	: :ad	: 2:	: 4:	: 1:	: 4:	: 4:	:
: Rindge Pump	: 7:	: 9:	: 7:	: 8:	: 6:	: 6:	: 7:
: Middle River P.O.	: 16:	: 11:	: 9:a	: 10:	: 10:a	: 6:	: 7:
: Stockton	: 42:	: 30:	: 30:	: 23:	: 25:	:	:
: Mossdale Bridge	:a	: 3:	: 9:	: 4:	:	: 4:	: 4:ab
Drainage Water Stations							
: Jersey Drain	: 68:	: 64:	: 61:	: 63:	: 24:	:	:
: Grand Island Dr. (Steamboat)e	: 8:	:	: 10:b	: 11:e	: 10:e	: 9:e	: 9:
: Camp 35 Dr. (Staten Island):	: 30:	: 27:	: 25:	: 25:	: 28:	: 26:	: 25:
: Bacon Island Drain	: 15:	: 13:	: 12:	: 13:	: 13:	: 13:	: 13:
: Mandeville Drain	:	: 25:	: 24:	: 24:	: 24:	: 24:	: 23:
: Camp 11 Dr. (Staten Island):	: 34:	: 28:	: 14:	: 12:	: 11:	: 7:	: 20:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 143 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1933
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	MARCH							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
: Point Orient	: 1400:	: 1180:	: :	: 1400:	: 1220:	: 1180:b	: 1220:	: 1320:
: Point Davis	: :	: 900:	: 900:	: 920:	: 600:	: 560:	: :a	: 420:
: Bulls Head Point	: 730:	: 620:	: 680:	: 560:	: 240:	: 250:a	: 260:a	: 130:
: Bay Point	: :b 230:a	: 34:b	: 320:a	: 68:	: 120:	: 50:a	: 30:a	: 12:
: O and A Ferry	: :d 13:	: 35:	: 20:a	: 10:	: 4:	: 2:a	: 2:	: :
: Innisfail Ferry	: 134:	: 96:	: :a	: 120:	: 108:a	: 94:a	: 88:	: 54:
North San Pablo Bay								
: Sonoma Creek Bridge	: 680:	: :	: 700:	: :	: 780:	: :b	: 780:	: :
: Grandview	: 860:	: :a	: 740:	: 1020:	: 980:	: 1020:b	: 900:	: 800:
: Vallejo	: :	: :	: :	: :b	: 460:	: 400:	: :	: :
: Cuttings Wharf	: 228:	: :	: :	: 300:	: :	: 94:	: :	: 15:
Sacramento River Delta								
: Collinsville	: 11:	: 7:	: 6:	: 5:	: 3:	: 3:	: 2:	: 1:
: Emmaton	: 1:	: 2:	: 1:	: 1:	: 1:	: 1:a	: 1:a	: 1:
: Sacramento	: 1:	: 1:	: 1:	: 1:	: 1:	: 1:b	: 1:	: 1:
San Joaquin River Delta								
: Antioch	: 7:	: :	: 6:	: 6:	: 5:	: 3:	: 3:a	: 2:
: Jersey	: 6:	: 6:	: 10:	: :	: :	: 6:b	: 5:	: 3:
: Central Landing	: 2:	: 2:	: 3:	: 2:	: :	: 2:a	: 2:	: 2:
: Rindge Pump	: 7:	: 10:	: 9:	: 10:	: 11:	: 13:	: 18:	: 13:
: Middle River P.O.	: 8:	: 5:	: 8:	: 7:	: 11:	: :b	: 10:	: 10:
: Stockton	: :a 28:	: 34:	: :	: :	: :	: :	: :	: :
: Mossdale Bridge	: :a 5:	: 6:	: 8:	: 11:	: :	: 9:b	: 10:	: 13:
Drainage Water Stations								
: Jersey Drain	: 59:	: 57:	: 62:	: :	: :	: 64:b	: 60:	: 59:
: Grand Is. Dr. (Steamboat):e	: 9:e	: 9:e	: 8:	: :e	: 7:e	: 8:e	: 8:e	: 7:
: Camp 35 Dr. (Staten Is.):	: 27:	: 27:	: 34:	: 37:	: 22:	: 24:	: 35:	: 23:
: Bacon Island Drain	: 13:	: 12:	: 24:	: 15:	: 13:	: 14:	: 11:	: 12:
: Mandeville Drain	: 22:	: 23:	: 25:	: :	: :	: :	: :	: :
: Camp 11 Dr. (Staten Is.):	: 32:	: 40:	: 48:	: 49:	: 23:	: 33:	: 39:	: 18:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 143 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1933
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	APRIL							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1020:	1240:b	1300:	1060:	1340:b	1260:b	1260:	
Point Davis	680:a	840:	:	:	:	a 800:	a 760:	700:
Bulls Head Point	210:a	380:a	170:	520:b	340:b	300:a	300:	270:
Bay Point	d 6:	a :	17:a	43:a	71:a	90:a	88:	:
O and A Ferry	3:a	5:b	2:a	3:a	4:b	8:	:	:
Innisfail Ferry	42:a	95:a	88:a	60:a	40:a	62:	:	52:
North San Pablo Bay								
Sonoma Creek Bridge	420:	a 560:	:	720:	:	a 640:	:	:
Grandview	a 760:b	820:a	840:	:	880:	a 900:	:	:
Vallejo	:	abd300:a	380:	:	a 500:	:	ad 300:	:
Cuttings Wharf	62:	:	:	170:	b 160:	:	:	190:
Sacramento River Delta								
Collinsville	1:a	2:a	1:	3:a	2:a	2:	4:	3:
Emmaton	2:a	1:a	1:	a :	1:a	1:	:	2:
Sacramento	:	b 1:ab	1:	1:a	1:b	1:b	1:	2:
San Joaquin River Delta								
Antioch	3:a	2:a	4:	2:a	3:a	3:a	7:	4:
Jersey	a :	4:bd	3:	:	:	b 3:	:	:
Central Landing	2:a	1:a	1:	a :	1:	:	:	:
Rindge Pump	12:a	13:b	15:	15:a	16:b	16:b	17:	16:
Middle River P. O.	a :	11:b	15:	12:a	11:a	11:b	10:	:
Stockton	:	:	:	:	:	:	:	39:
Mossdale Bridge	a 13:b	13:b	12:ab	12:a	11:b	10:b	8:	11:
Drainage Water Stations								
Jersey Drain	:	16:	:	49:	:	b 63:	:	:
Grand Is. Dr. (Steamboat)	6:	7:	6:	6:	7:	:	10:	8:
Camp 35 Dr. (Staten Is.)	26:	27:	24:	18:	37:	48:	28:	21:
Bacon Island Drain	12:	12:	10:	13:	11:	10:	11:	:
Mandeville Drain	24:	25:	26:	26:	25:	27:	26:	25:
Camp 11 Dr. (Staten Is.)	27:	27:	20:	42:	41:	100:	29:	16:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 143 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1933
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	MAY								
	2	6	10	14	18	22	26	30	
San Francisco, San Pablo and Suisun Bays									
Point Orient	:	:	1380:b	1480:	1380:	:	:	b 1300:	1320:
Point Davis	:a	620:a	720:a	900:	:	:	:	a 660:	660:
Bulls Head Point	:	320:b	510:a	340:	530:	360:b	300:ab	320:	300:
Say Point	:	28:a	75:a	86:	:	:	:	a 24:	65:
C and A Ferry	:a	12:a	9:	:	1:ab	15:b	6:b	6:a	6:
Innisfail Ferry	:	51:a	72:a	64:	56:ab	59:a	57:a	59:	45:
North San Pablo Bay									
Sonoma Creek Bridge	:	660:	:	b 940:	:	a 720:	:	a 740:	:
Grandview	:	920:	:	a 1040:	:	1020:	:	a 1020:	:
Vallejo	:	:	b 660:b	520:	:	:	a 420:	:	520:
Cuttings Wharf	:	170:	:	:	260:	:	:	:	450:
Sacramento River Delta									
Collinsville	:	1:	3:	:	3:a	1:a	2:	2:	1:
Ematon	:	1:a	2:	:	:	a	1:a	2:	1:
Sacramento	:b	.1	:	b 1:	1:b	1:b	1:b	1:	1:
San Joaquin River Delta									
Antioch	:	3:a	2:a	4:	5:a	4:a	2:a	3:	3:
Jersey	:	:	:	:	4:a	6:a	3:b	4:	4:
Central Landing	:	1:	:	:	a	2:	:	4:	6:
Pindge Pump	:	18:a	22:b	19:	17:a	15:b	14:b	15:	14:
Middle River P.O.	:	11:a	11:b	11:	11:a	11:b	13:b	11:	12:
Stockton	:ab	39:a	32:a	32:ab	32:a	33:	:	:	:
Mossdale Bridge	:	8:b	9:a	8:	8:a	8:	bd	11:	10:
Drainage Water Stations									
Jersey Drain	:	:	:	:	42:	31:	29:b	39:	40:
Grand Is. Dr. (Steamboat)	:c	7:c	7:c	10:	:	:	:	8:	:
Camp 35 Dr. (Staten Is.)	:	:	27:	13:	28:	:	10:	15:	18:
Bacon Island Drain	:	12:	12:	12:	13:	12:	11:	11:	11:
Mandeville Drain	:	26:	27:	28:	27:	:	27:	22:	19:
Camp 11 Dr. (Staten Is.)	:	:	32:	14:	20:	:	13:	17:	9:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 143 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1933
 Samples taken by local observers approximately one and one-half hours
 after high high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	JUNE								
	2	6	10	14	18	22	26	30	
San Francisco, San Pablo and Suisun Bays									
: Point Orient	: 1300:	: 1360:b	: 1340:	: 1260:	: 1260:b	: 1400:	: 1160:	: 1330:	
: Point Davis	: :	: :b	: 640:	: 640:	: 640:	: :a	: 760:		
: Bulls Head Point	: 400:b	: 560:b	: 460:	: 264:b	: 480:b	: 500:	: 340:	: 520:	
: Bay Point	: 40:bd	: 53:a	: 28:ab	: 11:	: 6:a	: 56:a	: 100:		
: O and A Ferry	: 4:b	: 5:b	: 5:	: 6:b	: 3:b	: 9:	: 33:		
: Innisfail Ferry	: 53:a	: 55:a	: 51:	: 47:a	: 49:	: :	: :a	: 36:	
North San Pablo Bay									
: Sonoma Creek Bridge	: 960:	: :a	: 940:	: :	: 840:	: :a	: 680:		
: Grandview	: a 980:	: :a	: 960:	: :	: 920:	: :	: 920:		
: Vallejo	: ac 460:a	: 440:	: :	: :	: :ae	: 400:a	: 440:d	: 700:	
: Cuttings Wharf	: 400:	: :b	: 360:	: :abd	: 440:	: :	: 380:		
Sacramento River Delta									
: Collinsville	: a 2:a	: 2:a	: 1:a	: 1:a	: 2:a	: 2:	: 5:a	: 3:	
: Ercatton	: b 3:a	: 4:a	: 3:a	: 1:cd	: 2:a	: 1:a	: 2:a	: 2:	
: Sacramento	: a 1:b	: 1:b	: 1:a	: 1:b	: 1:b	: 1:	: 1:a	: 1:	
San Joaquin River Delta									
: Antioch	: a 3:a	: 4:a	: 3:a	: 5:a	: 5:a	: 4:a	: 6:a	: 5:	
: Jersey	: :a	: 4:	: :a	: 6:	: :	: :a	: 4:a	: 4:	
: Central Landing	: :a	: 2:	: :	: :	: :	: 2:	: :	: :	
: Rindge Pump	: a 12:b	: 5:	: :a	: 2:a	: 3:b	: 2:	: 4:a	: 3:	
: Middle River P.O.	: a 11:b	: 11:b	: 6:	: :b	: 2:b	: 3:	: 1:a	: 1:	
: Stockton	: :	: :b	: 43:b	: 40:b	: 40:	: :	: 38:b	: 36:	
: Mossdale Bridge	: b 3:b	: 1:b	: 3:b	: 1:h	: 1:bd	: 1:ab	: 2:b	: 3:	
Drainage Water Stations									
: Jersey Drain	: b 6:	: 31:	: :	: 29:	: :	: :	: 15:	: 13:	
: Grand Is. Dr. (Steamboat)	: 5:	: 6:	: 8:	: 7:	: 6:	: 5:	: 5:	: 7:	
: Camp 35 Dr. (Staten Is.)	: 25:	: 25:	: 21:	: 19:	: 39:	: 25:	: 7:	: 7:	
: Bacon Island Drain	: 11:	: 11:	: 11:	: 4:	: 4:	: 3:	: 2:	: 2:	
: Mandeville Drain	: 18:	: :	: :	: 12:	: 10:	: 10:	: 8:	: 5:	
: Camp 11 Dr. (Staten Is.)	: 26:	: 20:	: 41:	: 30:	: 43:	: 24:	: 13:	: 24:	

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 143 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1933
 Samples taken by local observers approximately one and one-half hours
 after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	JULY								
	2	6	10	14	18	22	26	30	
San Francisco, San Pablo and Suisun Bays									
Point Orient	1330:b	1560:	1480:	1490:	1540:b	1620:	1520:	1660:	
Point Davis	980:		1080:a	1060:	1260:b	1300:	1180:		
Bulls' Head Point	780:		680:		b 900:b	920:	860:	1180:	
Bay Point	a 230:	160:	460:	410:			700:a	620:	
O and A Ferry	214:b	190:a	254:	340:b	480:b	450:a	400:	460:	
Innisfail Ferry	36:a	91:a	118:a	146:a	180:		a 290:d	350:	
North San Pablo Bay									
Sonoma Creek Bridge	960:				960:		1100:		
Grandview	980:		a 1020:		1040:		1040:		
Vallejo	d 760:		d 1000:		a c d 900: c d	980:			
Cuttings Wharf	380:		520:		b 610:		700:		
Sacramento River Delta									
Collinsville	a 6:a	59:	72:a	84:a	118:a	204:a	190:a	220:	
Emmaton	a 1:		5:a	3:a	9:a	14:	44:a	42:	
Sacramento	a 1:b	2:	1:a	2:b	3:b	3:	2:a	4:	
San Joaquin River Delta									
Antioch	a 5:a	20:	57:a	34:a	61:a	129:	178:a	160:	
Jersey	a 3:a	4:	9:		a 19:		a 28:		
Central Landing		a 1:a	3:b	6:b	3:b	6:	5:a	6:	
Rindge Pump	::a 5:b	7:	7:a	7:a	6:b	8:	9:a	14:	
Middle River P.O.	a 2:b	2:	a	4:a	3:b	4:	4:a	6:	
Stockton	b 38:		b	39:b	40:b	49:	49:b	49:	
Mossdale Bridge	b 3:b	6:ab	8:a	8:a	8:b	8:	9:b	10:	
Drainage Water Stations									
Jersey Drain	21:	16:	39:			21:		19:	
Grand Is. Dr. (Steamboat)	7:	5:	5:	8:	7:	7:	9:	11:	
Camp 35 Dr. (Staten Is.)	8:	6:	6:	6:	5:	7:	4:	4:	
Bacon Island Drain	2:	3:	3:	8:	4:	4:	5:	4:	
Mandeville Drain	6:	5:	5:	10:	4:	4:	5:	6:	
Camp 11 Dr. (Staten Is.)	7:	6:	8:	7:	6:	12:	11:	8:	

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 143(CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1933
 Samples taken by local observers approximately one and one-half hours
 after high tide.

Salinity expressed in parts of chlorine per 100,000 parts of water

Station	AUGUST								
	2	6	10	14	18	22	26	30	
San Francisco, San Pablo and Suisun Bays									
Point Orient	1640:b	1660:	1720:	1680:	1720:b	1700:	1700:	1760:	
Point Davis	bd1420:b	1400:	1460:	1480:	:	:	1600:a	1420:	
Bulls Head Point	1260:	:	1060:	1220:b	1200:a	1160:	1230:	1300:	
Bay Point	a 600:a	640:	820:abd	900:a	860:a	980:	1130:	:	
O and A Ferry	b 580:b	600:a	620:	660:b	720:b	700:	760:	880:	
Innisfail Ferry	a 420:a	510:a	520:a	600:a	600:a	640:	720:a	860:	
North San Pablo Bay									
Sonoma Creek Bridge	1200:	:	1300:	:	a 1320:	:	1340:	:	
Grandview	1120:	:	1200:	:	a 1280:	:	1440:	:	
Vallejo	:	:	del220:	:	:	bd1300:d	1340:	:	
Cuttings Wharf	940:	:	900:	:	b 1060:	:	1120:	:	
Sacramento River Delta									
Collinsville	a 310:	410:a	420:a	420:a	460:a	560:	600:ab	570:	
Emmaton	:	a 128:	159:	:	:	a 280:	380:b	250:	
Three Mile Slough Bridge	:	:	:	152:b	200:a	210:	285:a	170:	
Rio Vista Bridge	:	:	b 22:	b 58:	b 60:	:	73:b	108:	
Isleton Bridge	:	:	:	:	:	:	b 33:	:	
Sacramento	b 4:b	6:a	6:a	4:b	7:a	5:a	6:b	6:	
San Joaquin River Delta									
Antioch	a 220:a	290:a	300:a	320:a	360:a	460:	580:a	490:	
Curtis Landing	:	:	:	a 226:a	280:	:	a 290:a	320:	
Jersey	:	b 168:a	110:a	118:	:	a 200:a	170:a	240:	
Webb Pump	:	:	:	:	b 58:b	68:	82:b	90:	
Central Landing	:	b 8:a	8:a	12:	:	a 17:	a 19:	:	
Dutch Slough	:	:	:	a 27:bd	31:a	40:	52:c	54:	
Mandeville Pump	:	:	:	:	:	:	a 17:	:	
Ridge Pump	a 10:b	14:a	14:a	17:b	15:b	18:a	17:a	22:	
Middle River P.O.	ad 5:bd	5:ad	7:a	7:a	7:b	8:	10:	:	
Stockton	b 49:	:	ad 55:bd	48:	:	:	66:b	64:	
Mossdale Bridge	:	b 9:b	11:b	11:b	10:	10:abd	9:	:	
Mokelumne River Delta									
Southwest Point	:	:	:	a 8:a	10:b	17:a	8:a	15:	
Camp 33 Staten Island	:	:	:	a 5:a	9:b	8:a	9:a	9:	
Camp 11 Staten Island	:	:	:	a 3:a	4:b	5:a	3:a	5:	
Camp 25 Staten Island	:	:	:	a 7:a	4:b	7:a	6:a	7:	
Drainage Water Stations									
Jersey	:	:	46:	:	53:	:	77:	79:	76:
Grand Is. Dr. (Steerboat)	8:	10:	8:	9:	9:	12:	13:	15:	
Camp 35 Dr. (Staten Is.)	4:	7:	7:	9:	9:	9:	9:	11:	
Bacon Island Drain	5:	6:	7:	8:	9:	10:	12:	15:	
Mandeville Drain	b 6:	8:	10:	11:	10:	13:	16:	20:	
Camp 11 Dr. (Staten Is.)	11:	14:	12:	15:	9:	9:	11:	15:	

TABLE 143 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1933
 Samples taken by local observers approximately one and one-half hours
 after high high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	OCTOBER							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1760:	1780:	1760:	1620:	1680:	1760:	1760:	1760:
Bulls Head Point	abl040:	1160:	1260:	510:	1070:	1240:	1120:	abl220:
Bay Point	980:a	920:a	860:	:	:	:	a 720:	:
O and A Ferry	680:	610:	600:b	590:	560:	720:	380:a	600:
Innisfail Ferry	b 840:	820:	860:	810:	660:	660:a	720:	740:
North San Pablo Bay								
Sonoma Creek Bridge	1540:	:	1620:	:	1520:	:	1520:	:
Grandview	1600:	:	1650:	:	1640:	:	1640:	:
Vallejo	:	:	:	1280:	1340:	1300:	:	:
Cuttings Wharf	1200:	:	1320:	:	:	1280:	:	1320:
Sacramento River Delta								
Collinsville	520:	500:a	460:	360:	400:	460:a	380:	360:
Emmaton	220:	210:	210:	:	:	114:a	96:	162:
Three Mile Slough Bridge	120:	170:a	90:	67:ab	51:	73:	63:	101:
Rio Vista Bridge	25:	52:	13:	5:	4:	13:a	8:	7:
Junction Point	8:	20:a	7:	4:	4:	4:a	4:	:
Isleton Bridge	5:	7:	5:	3:	2:	3:	:	:
Sacramento	2:a	2:a	2:	2:ab	4:a	2:a	2:ab	2:
San Joaquin River Delta								
Antioch	420:	460:	280:	280:	340:	320:	350:	370:
Curtis Landing	320:e	330:a	260:	210:	238:	246:	:	:
Jersey	:a	170:a	130:	:	:	:	:	:
Webb Pump	:ab	42:	44:a	32:	30:	35:a	25:b	33:
Central Landing	13:	:	:	6:	:	:a	9:b	8:
Dutch Slough	:ab	67:	:	:	:	:	:	:
Bacon Pump	22:	23:	20:	15:	15:	17:b	16:	16:
Mandeville Pump	25:	25:	24:	21:	21:	18:b	18:	19:
Rindge Pump	17:a	18:	:	10:	14:a	12:a	16:a	15:
Middle River P.O.	:ab	13:	:a	12:	14:	11:a	11:a	11:
Stockton	:a	37:	37:b	43:	51:	49:	48:	:
Mossdale Bridge	:ab	7:	:a	7:	5:	5:	8:a	8:a
Mokelumne River Delta								
Southwest Point	:ab	7:a	7:a	6:	5:	4:a	6:a	5:
Camp 33 Staten Island	:ab	3:a	5:a	4:	2:a	2:a	3:a	2:
Drainage Water Stations								
Jersey	:	80:	71:	:	:	:	:	:
Grand Is. Dr. (Steambot)	13:	12:	13:	11:	16:	19:	17:	13:
Camp 35 Dr. (Staten Is.)	16:	15:	16:	16:	17:	13:	18:	18:
Bacon Island Drain	:	17:	17:	15:	14:	19:b	14:	16:
Mandeville Drain	33:	31:	32:	33:	29:	31:	30:	28:
Camp 11 Dr. (Staten Is.)	20:	23:	11:	:	9:	8:	13:	19:

TABLE 144

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1934
 Samples taken by local observers approximately one and one-half hours
 after high high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	FEBRUARY*							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Bulls Head Point			460:	515:	420:	ab 360:	250:	
	Sacramento River Delta							
Collinsville		8:		4:	5:	1:	2:	
	San Joaquin River Delta							
Antioch		5:	6:	6:a	5:	3:	4:	

Station	MARCH							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Bulls Head Point	90:	150:	380:	260:	300:	160:	270:b	260:
	Sacramento River Delta							
Collinsville	a 3:	7:	3:	3:	4:	2:	3:	
	San Joaquin River Delta							
Antioch	a 4:	4:	3:	3:	4:	4:	a 3:	

Station	APRIL							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Bulls Head Point	a 50:	170:b	320:b	510:	420:	420:b	600:b	800:
	Sacramento River Delta							
Collinsville	2:	2:a	3:	3:	5:a	3:a	6:a	6:
	San Joaquin River Delta							
Antioch	4:e	3:a	4:a	4:	a	5:a	4:a	9:

* Due to temporary discontinuance of Water Supervisor work, salinity sampling was completely stopped on November 2, 1933 and only partially resumed from February 6, 1934, to May 10, 1934.

TABLE 144 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1934
 Samples taken by local observers approximately one and one-half hours
 after high high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	MAY								
	2	6	10	14	18	22	26	30	
San Francisco, San Pablo and Suisun Bays									
Point Orient				b 1560:		1440:	1600:	b 1680:	
Point Davis				b 1100:	a 1080:	1120:		b 1320:	b 1280:
Bulls Head Point	620:	540:	b 660:	b 820:	800:	860:	a 760:	1100:	
Bay Point							a 520:	a 600:	
O and A Ferry				b 82:	b 156:	a 126:		a 156:	b 340:
Innisfail Ferry				a 100:	a 118:	130:	a 140:	a 158:	a 224:
Sacramento River Delta									
Collinsville		a 21:	a 10:	a 35:	53:	a 42:	a 72:	a 110:	
Emmaton			d 1:						
Sacramento				b 1:	1:	a 6:	b 2:	b 7:	
San Joaquin River Delta									
Antioch	a 12:	a 12:	a 11:	a 21:	32:	a 24:	a 37:	a 75:	
Jersey				a 4:	6:	a 6:		b 5:	
Central Landing				b 4:	4:	a 3:	b 4:	a 3:	6:
Rindge Pump				b 14:	16:	a 21:	21:	b 17:	
Middle River P.O.				b 9:	9:	a 12:	b 11:	12:	10:
Stockton				b 51:	69:	ab 60:	49:		
Mossdale Bridge				b 12:	9:	a 12:	a 12:	b 12:	12:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 144 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1934
 Samples taken by local observers approximately one and one-half hours
 after high high tide

Salinity expressed in parts of chlorine per 100,000 parts of water

Station	JUNE							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
: Point Orient	: 1660:	: 1620:b	: 1060:b	: 1680:	: 1620:	: 1660:b	: 1740:	: 1720:
: Point Davis	: a 1180:a	: 1140:	: 1400:a	: 1240:	: 1280:	:	:	:
: Bulls Head Point	: 880:	: 940:	:	: 1040:	: 1020:	: 1060:a	: 940:	: 1060:
: Bay Point	: 680:a	: 540:a	: 760:a	: 740:	: 760:a	: 640:a	: 740:a	: 880:
: O and A Ferry	:	: b 320:a	: 300:b	: 400:	:	: 540:b	: 580:a	: 480:
: Innisfail Ferry	: 300:a	: 340:a	: 400:a	: 440:a	: 400:a	: 440:a	: 540:a	: 600:
Sacramento River Delta								
: Collinsville	: a 130:a	: 116:a	: 222:a	: 190:a	: 240:a	: 260:a	: 380:a	: 380:
: Emmaton	:	:	:	: a 27:a	: 23:a	: 61:	: 140:	:
: Three Mile Slough Bridge:	: 7:b	: 6:a	: 13:a	: 17:a	: 14:a	: 15:b	: 70:	: 88:
: Rio Vista Bridge	: 5:b	: 6:b	: 4:b	: 4:	: 4:b	: 4:b	: 11:a	: 16:
: Junction Point	:	:	:	:	: a 6:a	: 6:	: 5:	:
: Sacramento	: 2:a	: 2:b	: 4:b	: 3:b	: 4:b	: 6:b	: 5:	: 5:
San Joaquin River Delta								
: Antioch	: a 62:a	: 114:a	: 130:a	: 154:a	: 118:a	: 200:a	: 300:	:
: Curtis Landing	:	:	: b 96:a	: 60:a	: 114:a	: 138:	:	:
: Jersey	: 16:a	: 13:	:	: a 29:a	: 19:a	: 31:a	: 64:	:
: Webb Pump	:	: b 6:b	: 9:b	: 10:	: 12:b	: 16:b	: 22:	: 27:
: Central Landing	: a 5:a	: 6:a	: 8:b	: 7:	: 6:b	: 5:	: 8:	: 7:
: Dutch Slough	: a 7:a	: 9:b	: 11:	: 11:b	: 10:b	: 35:	: 23:	:
: Bacon Pump	: b 9:	: b 24:b	: 9:a	: 9:b	: 9:	: 10:	:	:
: Mandeville Pump	:	:	: a 10:b	: 8:a	: 12:	: 7:	:	:
: Rindge Pump	: 17:a	: 22:a	: 20:b	: 19:a	: 22:a	: 21:b	: 18:	: 15:
: East Contra Costa I.D.	: 11:b	: 13:b	: 12:b	: 11:b	: 13:b	: 11:b	: 13:	: 10:
: Middle River P.O.	: 10:a	: 12:	: 11:b	: 12:	: a 13:b	: 11:	: 9:	:
: Mansion House	:	:	:	:	: a 9:a	: 13:	: 11:	:
: Stockton	: 42:b	: 44:b	: 54:b	: 46:b	: 48:b	: 49:b	: 53:	: 55:
: Mossdale Bridge	: 12:b	: 13:b	: 12:b	: 12:b	: 13:b	: 13:b	: 15:	: 12:
Mokelumne River Delta								
: Southwest Point	: 3:a	: 6:a	: 6:b	: 7:a	: 5:a	: 5:a	: 8:	: 6:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 144 (CONTINUED)
 SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1934
 Samples taken by local observers approximately one and one-half hours
 after high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	JULY								
	2	6	10	14	18	22	26	30	
	San Francisco, San Pablo and Suisun Bays								
: Point Orient	: 1620:	: 1720:	: 1800:	:	: 1740:	: 1740:b	: 1640:	: 1720:	:
: Point Davis	:	:	:	: 1500:	:	: b	: 1620:	: 1640:	:
: Bulls Head Point	: 1080:	: 1240:	:	: 1360:	: 1200:	: 1420:b	: 1330:	: 1340:	:
: Bay Point	: a 900:a	: 900:	:	:	:	:	:	:	:
: O and A Ferry	: 680:b	: 740:a	: 600:	: 700:a	: 960:	: 920:b	: 880:a	: 880:	:
: Innisfail Ferry	: a 580:b	: 640:	:	: a	: 720:a	: 740:a	: 880:	: 820:	:
	Sacramento River Delta								
: Collinsville	: a 390:d	: 400:b	: 640:	: 620:a	: 580:a	: 600:a	: 620:	: 760:	:
: Emmaton	: a 132:a	: 146:b	: 280:	: a	: 280:a	: 310:a	: 370:	: 470:	:
: Three Mile Slough Bridge:	: 104:b	: 146:a	: 140:b	: 230:a	: 190:a	: 250:a	: 320:a	: 330:	:
: Rio Vista Bridge	: 22:b	: 34:b	: 50:	: 70:	: 94:b	: 164:b	: 200:	: 220:	:
: Junction Point	: a 7:a	: 8:a	: 10:	: 33:a	: 32:a	: 47:a	: 70:a	: 114:	:
: Liberty Ferry	: a 4:a	: 3:a	: 5:	: 7:ad	: 8:ad	: 21:b	: 31:	: 35:	:
: Isleton Bridge	: 8:b	: 8:b	: 14:	: 21:	: 24:b	: 46:b	: 66:	: 80:	:
: Howard Ferry	:	: b	: 8:	: 14:	: 15:b	: 32:a	: 22:a	: 34:	:
: Sutter Slough	:	:	:	: 5:	: 5:b	: 6:b	: 8:a	: 8:	:
: Little Holland Ferry	:	:	:	: 6:a	: 6:a	: 4:b	: 6:a	: 5:	:
: Ryde	: a 5:a	: 7:a	: 5:	: 5:a	: 4:b	: 5:	: 4:	: 5:	:
: R. D. 2068	:	:	:	: 5:	: 4:ad	: 3:b	: 4:a	: 5:	:
: Walnut Grove	: bd 6:b	: 5:b	: 3:	: 5:	:	: b	: 5:	: 5:	:
: Paintersville Bridge	:	:	:	: 5:	: 5:b	: 6:b	: 5:	: 6:	:
: Sacramento	: a 4:b	: 4:b	: 5:	: 5:a	: 5:	: b	: 4:a	: 5:	:
	San Joaquin River Delta								
: Antioch	: a 300:a	: 340:a	: 380:	: 440:	: 580:a	: 480:a	: 560:	: 680:	:
: Curtis Landing	: a 240:a	: 220:a	: 290:a	: 360:a	: 320:a	: 390:	: a	: 550:	:
: Jersey	: a	: 72:bd	: 238:	: a	: 170:	: a	: 240:a	: 350:	:
: Webb Pump	:	: e 39:f	: 47:f	: 78:	: 104:b	: 150:	: 200:	:	:
: Central Landing	: a 15:b	: 13:b	: 17:	: 25:a	: 23:b	: 44:b	: 52:	: 46:	:
: Dutch Slough	: a	: 25:b	: 33:	:	: 53:a	: 62:b	: 120:	: 116:	:
: Ward Landing	:	:	:	: 17:a	: 19:a	: 23:b	: 37:a	: 43:	:
: Bacon Pump	: b 10:ad	: 11:bd	: 11:	: 17:d	: 21:d	: 21:b	: 35:	: 36:	:
: Mandeville Pump	:	: a	: 13:	: 17:b	: 18:	: b	: 34:	: 45:	:
: King Island Pump.	:	:	:	: 12:	:	: b	: 15:a	: 20:	:
: Rindge Pump	: a 20:a	: 19:b	: 20:	: 15:a	: 18:a	: 18:	: 20:a	: 20:	:
: Orwood Bridge	:	:	:	: 11:b	: 17:b	: 16:b	: 22:	: 23:	:
: East Contra Costa I.D.	: b 12:b	: 10:b	: 10:	: 11:a	: 11:b	: 14:b	: 13:	: 16:	:
: Middle River P.O.	: a 11:a	: 11:b	: 11:	: 11:a	: 13:a	: 14:b	: 17:a	: 18:	:
: Mansion House	:	: ad 10:b	: 12:	: a	: 13:a	: 14:b	: 19:a	: 18:	:
: Stockton Country Club	: a 26:a	: 26:b	: 25:	: 23:	: a	: 28:b	: 29:a	: 30:	:
: Clifton Court Ferry	: b 12:b	: 11:b	: 12:	: b	: 11:b	: 12:b	: 17:b	: 14:	:
: Stockton	:	: b 52:b	: 68:	: b	: 58:b	: 58:b	: 68:	:	:
: Garwood Bridge	: a 23:b	: 26:b	: 28:	: 28:a	: 29:a	: 31:b	: 32:a	: 30:	:
: Brandts Bridge	:	:	:	: a	: 11:b	: 21:b	: 14:a	: 11:	:
: Williams Bridge	: a 14:b	: 14:b	: 12:	: 12:a	: 11:b	: 11:b	: 13:a	: 12:	:
: Whitehall	:	: b 12:	: 12:	: a	: 12:a	: 12:a	: 12:	:	:
: Mossdale Bridge	: a 10:b	: 13:b	: 9:	: 11:b	: 8:bd	: 9:b	: 8:b	: 7:	:
	Mokelumne River Delta								
: Southwest Point	: a 6:a	: 5:a	: 6:	: 15:a	: 13:a	: 9:b	: 34:a	: 24:	:
: Tyler Island Ferry	: b 5:b	: 6:b	: 5:	: 7:	: 6:b	: 6:b	: 10:a	: 5:	:
: Camp 11 Staten Island	: a 6:a	: 5:a	: 8:	: 6:a	: 6:a	: 6:b	: 7:a	: 8:	:
: Camp 29 Staten Island	: a 6:a	: 5:a	: 5:	: 7:a	: 8:a	: 10:b	: 11:a	: 13:	:
: Camp 20 Staten Island	: a 9:a	: 15:a	: 5:	: 7:a	: 7:a	: 7:b	: 9:a	: 8:	:

a. b. c. d. e. f. See footnotes last page of this table.

TABLE 144 (CONTINUED)
 SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1934
 Samples taken by local observers approximately one and one-half hours
 after high high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	AUGUST							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
: Point Orient	: 1740:	: 1740:b	: 1720:	: 1820:	: 1740:	:	:	: 1840:
: Point Davis	:a 1640:	b 1640:b	: 1660:	:	: 1640:	:	: 1670:	: 1800:
: Bulls Head Point	: 1460:	b 1480:b	: 1380:	: 1580:	: 1480:	:	: 1480:	: 1500:
: Bay Point	:	:ad1200:	:	:	:ad1220:	:	:	:
: O and A Ferry	: 960:	:b 1080:	: 980:	: 1050:b	: 1140:	: 1160:	a 1080:	:
: Innisfail Ferry	:a 920:	a 1000:	: 980:	: 1040:	: 1080:b	: 1080:a	: 1220:	a 1170:
	Sacramento River Delta							
: Collinsville	:a 700:	a 760:a	: 860:	: 920:	: 800:	:	a 980:	: 1080:
: Emmaton	:a 440:	a 440:a	: 500:	: 640:	:	:	: 760:	: 740:
: Three Mile Slough Bridge	:a 330:	b 400:b	: 480:	: 540:	: 440:a	: 560:	: 640:	: 660:
: Rio Vista Bridge	: 240:	b 280:b	: 260:	: 360:	: 440:b	: 440:	: 440:	: 520:
: Junction Point	:a 108:	a 112:a	: 144:a	: 250:a	: 180:a	: 320:	: 360:a	: 310:
: Liberty Ferry	:a 38:	a 51:b	: 90:	: 124:	: 142:a	: 160:a	: 210:	: 220:
: Grand Is. Dr. (Steamboat)	: 110:	b 96:b	: 170:	: 220:	: 250:b	: 270:	: 270:	:
: Isleton Bridge	: 112:	b 116:b	: 154:	: 200:	:b 310:	: 220:	: 270:	:
: Howard Ferry	:b 60:	:a 60:	: 118:	: 232:	a 120:	: 195:	:	:
: Sutter Slough	:b 19:	b 14:b	: 16:	: 20:	: 22:b	: 50:	: 21:	: 23:
: Little Holland Ferry	:a 7:	a 7:a	: 9:a	: 11:	:a 14:	: 13:	a 8:	:
: Ryde	:a 5:	b 8:b	: 7:	: 8:	: 9:b	: 11:	:a 7:	:
: R. D. 2068	:b 5:	a 6:b	: 7:a	: 10:a	: 14:a	: 33:	: 58:a	: 86:
: Walnut Grove	:b 6:	b 6:b	: 6:	: 7:b	: 7:b	: 6:	: 10:	: 10:
: Paintersville Bridge	:b 6:	b 7:b	: 7:	: 6:b	: 6:b	: 6:	: 7:	:
: Sacramento	:a 5:	:	:a 6:	:a 5:	:	:	:	:
	San Joaquin River Delta							
: Antioch	:a 580:	a 640:a	: 740:	: 800:	: 900:a	: 820:	: 890:	: 900:
: Curtis Landing	:a 580:	a 600:a	: 620:a	: 640:a	: 640:a	: 700:a	: 810:a	: 700:
: Jersey	:a 300:	a 390:	:	: 520:	a 420:	b 600:	:	:
: Webb Pump	:	:	:	:	:	:	:	:
: Central Landing	:b 61:	b 84:b	: 78:	:a 84:	:	:	:	a 280:
: Dutch Slough	:a 132:	d 126:b	: 170:a	: 240:	: 250:b	: 255:	: 250:	:
: Ward Landing	:a 45:	a 57:a	: 32:	: 90:a	: 90:a	: 118:	: 129:	: 140:
: Bacon Pump	:b 50:	b 54:b	: 68:	: 76:b	: 94:b	: 110:f	: 111:	: 122:
: Mandeville Pump	:bd 50:	b 56:b	: 78:	:b 90:	bd 118:	:	:	:
: King Island Pump	:	:a 23:	a 37:	a 48:	a 42:	a 44:	: 58:	:
: Rindge Pump	:a 24:	a 28:b	: 34:a	: 33:a	: 42:a	: 46:	: 56:a	: 66:
: Orwood Bridge	:b 24:	b 31:b	: 37:	: 45:b	: 56:b	: 62:	: 66:	: 80:
: East Contra Costa I.D.	:b 16:	b 22:b	: 22:	:b 31:	b 35:	: 41:	a 23:	:
: Middle River P.O.	:b 22:	b 32:b	: 40:a	: 47:a	: 48:b	: 62:	: 76:a	: 66:
: Mansion House	:a 21:	b 27:b	: 33:a	: 38:a	: 38:b	: 52:	: 59:a	: 62:
: Stockton Country Club	:	:b 34:	a 35:	a 40:	: 34:	: 37:	: 44:	:
: Clifton Court Ferry	:ab 15:	b 16:	: 19:	: 17:b	: 22:b	: 32:	: 29:b	: 51:
: Stockton	:b 62:	:b 69:	: 76:	b 76:	b 74:	: 74:	:	:
: Garwood Bridge	:a 32:	b 38:b	: 38:a	: 34:a	: 28:a	: 34:	: 37:	a 23:
: Brandts Bridge	:	:b 12:	b 14:	a 12:	b 19:	: 15:	: 9:	:
: Williams Bridge	:b 13:	b 13:b	: 15:b	: 17:a	: 20:b	: 29:	:a 28:	:
: Whitehall	:b 11:	b 11:b	: 12:	a 10:	a 11:	:a 9:	a 12:	:
: Mossdale Bridge	:b 9:	b 8:	: 12:	b 8:	a 15:	b 10:	a 7:	: 17:
	Mokelumne River Delta							
: Southwest Point	:a 20:	a 17:ab	: 70:	a 68:	a 38:	a 104:	: 107:	a 72:
: Tyler Island Ferry	:b 5:	b 7:	: 5:	: 6:	b 6:	: 7:	: 8:	:
: Camp 11 Staten Island	:a 7:	a 8:	: 13:	a 14:	a 10:	: 21:	: 25:	a 14:
: Camp 29 Staten Island	:a 14:	a 15:	b 20:	a 22:	a 24:	a 34:	: 50:	a 52:
: Camp 20 Staten Island	:a 9:	a 9:	b 11:	a 11:	a 10:	: 18:	: 16:	: 12:

TABLE 144 (CONTINUED)
 SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1934
 Samples taken by local observers approximately one and one-half hours
 after high high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	SEPTEMBER							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
0: : Point Orient	:	b 1800:	1760:	1840:	:	1780:e	1840:	1800:
0: : Point Davis	:	1700:	:	1660:	1720:	1700:	1780:	1740:
0: : Bulls Head Point	:	1540:b	1600:	1640:	1480:	1520:ab	1540:a	1460:
0: : Bay Point	:	a 1300:	:	1460:	1420:ad	1360:ad	1280:a	1360:d
0: : O and A Ferry	:	1200:b	1160:ab	1180:	1160:	1100:	1040:	1020:
0: : Innisfail Ferry	:	a 1200:a	1140:	1200:	1220:a	1200:	1240:	1240:a
Sacramento River Delta								
0: : Collinsville	:	a 1080:a	1000:	1060:a	880:a	940:	920:	920:
0: : Emmaton	:	a 560:	:	720:a	500:a	520:	560:	420:a
0: : Three Mile Slough Bridge	:	a 520:a	500:	620:a	460:b	520:ab	520:	340:
0: : Rio Vista Bridge	:	b 380:b	360:	490:	400:b	400:	320:	260:
0: : Junction Point	:	a 260:a	228:	410:a	210:a	240:	260:a	200:a
0: : Liberty Ferry	:	a 170:a	152:	:	230:a	180:	160:a	120:
0: : Grand Is. Dr. (Steamboat)	:	:	b 240:	:	350:	180:	120:	190:a
0: : Isleton Bridge	:	230:b	230:	35:	290:b	200:	34:	170:
0: : Howard Ferry	:	a 46:a	35:	62:	:	:	:	:
8: : Sutter Slough	:	a 7:b	12:	8:	11:b	7:	4:	:
7: : Little Holland Ferry	:	a 8:b	9:	7:a	7:a	7:	:	:
6: : Ryde	:	:	b 6:ab	7:a	7:a	6:	5:	:
0: : R. D. 2068	:	a 92:a	100:f	108:a	90:a	94:b	98:a	126:a
0: : Walnut Grove	:	:	7:	8:	8:	6:	:	:
0: : Paintersville Bridge	:	b 6:b	8:	7:	6:	5:	:	:
0: : Sacramento	:	:	:	:	ad	3:ab	4:a	5:a
San Joaquin River Delta								
0: : Antioch	:	a 840:a	840:	960:	860:a	800:	800:	760:
0: : Curtis Landing	:	a 740:a	720:a	700:	:	:	660:	660:a
0: : Jersey	:	:	:	620:	620:	:	:	460:
8: : Webb Pump	:	b 340:b	340:	340:	a 300:	:	:	280:
0: : Central Landing	:	a 90:a	72:bd	78:	a 64:	62:	:	:
0: : Dutch Slough	:	a 250:a	260:a	280:a	260:a	270:	270:a	270:
2: : Ward Landing	:	a 140:a	142:	190:a	144:a	156:	190:a	158:a
0: : Bacon Pump	:	b 120:b	132:	:	146:bd	140:	:	160:
0: : Mandeville Pump	:	:	d 152:	:	:	d 166:	:	:
6: : King Island Pump	:	a 86:a	76:	88:	104:	:	:	:
0: : Rindge Pump	:	a 58:ab	62:ab	72:a	72:a	84:ab	86:a	80:a
3: : Orwood Bridge	:	b 76:b	84:	:	94:b	104:	107:b	104:b
6: : East Contra Costa I.D.	:	b 50:b	54:	60:	68:b	66:	70:	72:b
2: : Middle River P.O.	:	a 82:b	92:ab	100:a	98:a	94:ab	102:a	92:
4: : Mansion House	:	a 62:b	74:ab	80:a	74:a	88:	90:	90:
1: : Stockton Country Club	:	a 42:b	39:ab	40:	:	40:ab	38:	39:a
3: : Clifton Court Ferry	:	b 31:b	39:	34:	28:b	35:	40:	34:a
0: : Stockton	:	:	b 64:	66:	:	:	:	62:
8: : Garwood Bridge	:	a 32:b	36:ab	30:a	21:a	27:ab	33:a	17:a
2: : Brandts Bridge	:	e 9:b	9:	9:	9:a	9:	11:	:
7: : Williams Bridge	:	b 31:b	41:ab	29:b	43:b	24:	15:ad	16:
0: : Whitehall	:	a 9:a	11:ab	9:a	10:	:	:	:
0: : Mossdale Bridge	:	b 8:b	10:	8:ab	10:b	9:ab	21:b	23:b
Mokelumne River Delta								
4: : Southwest Point	:	a 60:a	48:ab	90:a	42:a	47:	38:a	19:a
2: : Tyler Island Ferry	:	b 7:b	7:	7:	7:b	7:	:	7:
2: : Camp 11 Staten Island	:	a 12:a	15:ab	19:a	7:a	7:	9:	:
2: : Camp 29 Staten Island	:	a 51:a	44:ab	47:a	42:a	42:	36:a	34:a
2: : Camp 20 Staten Island	:	a 12:a	13:ab	11:a	5:a	4:	5:	30:

TABLE 144 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1934

Samples taken by local observers approximately one and one-half hours
after high high tide

Salinity expressed in parts of chlorine per 100,000 parts of water

Station	OCTOBER							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
: Point Orient	: 1800:	1800:	1820:	1720:	1720:	1800:	1780:	:
: Point Davis	: 1680:	1640:	1640:	1610:	1550:	1680:	:	:
: Bulls Head Point	:a 1380:	ab1420:	1460:	1410:	1360:	1360:	1380:	:
: Bay Point	:	1220:	1240:	1170:	:	1100:	1100:	bd1020:
: O and A Ferry	:a 920:	880:	890:	a 800:	ab 780:	ab 660:	820:	640:
: Innisfail Ferry	:a 1260:	b 1160:	1030:	1060:	1070:	1060:	980:	880:
Sacramento River Delta								
: Collinsville	:a 660:	800:	770:	a 620:	560:	580:	500:	:
: Emmaton	:a 510:	470:	290:	a 380:	a 220:	ab 240:	a 90:	202:
: Three Mile Slough Bridge	:a 470:	400:	a 280:	de 385:	240:	290:	a 154:	216:
: Rio Vista Bridge	:b 310:	270:	305:	220:	200:	140:	90:	42:
: Junction Point	:a 240:	202:	190:	a 105:	88:	100:	a 54:	21:
: Liberty Ferry	:a 140:	114:	106:	77:	58:	50:	30:	a 24:
: Grand Is. Dr. (Steamboat)	:a 35:	:	131:	65:	:	56:	:	40:
: Isleton Bridge	:b 3:	4:	96:	10:	9:	5:	:	:
: Howard Ferry	:	:	:	:	:	:	:	1:
: R. D. 2068	:a 96:	ab 176:	110:	118:	116:	116:	a 108:	104:
: Sacramento	:b 2:	ab 1:	a 1:	a 1:	ab 1:	ab 1:	a 1:	1:
San Joaquin River Delta								
: Antioch	:a 660:	620:	580:	620:	540:	500:	460:	440:
: Curtis Landing	:a 610:	520:	540:	420:	400:	400:	410:	400:
: Jersey	:	:	a 340:	:	340:	:	a 260:	220:
: Webb Pump	:b 220:	:	:	:	:	ab 148:	140:	112:
: Central Landing	:	ab 40:	43:	:	24:	54:	a 11:	:
: Dutch Slough	:a 250:	240:	250:	:	200:	194:	a 178:	:
: Ward Landing	:a 124:	128:	100:	a 120:	106:	98:	102:	82:
: Bacon Pump	:b 148:	142:	135:	141:	130:	120:	112:	80:
: Mandeville Pump	:ad 152:	d 156:	:	d 140:	148:	ab 128:	:	:
: King Island Pump	:a 80:	80:	a 96:	93:	78:	86:	90:	80:
: Rindge Pump	:a 74:	72:	a 60:	a 71:	94:	ab 52:	41:	30:
: Orwood Bridge	:b 100:	96:	91:	96:	82:	ab 62:	64:	42:
: East Contra Costa I.D.	:b 68:	70:	73:	62:	60:	54:	a 48:	39:
: Middle River P.O.	:a 104:	108:	a 104:	a 94:	:	ab 83:	a 64:	72:
: Mansion House	:a 74:	78:	ad 74:	ad 73:	64:	58:	a 34:	22:
: Stockton Country Club	:b 37:	ab 31:	d 32:	a 30:	25:	ab 21:	a 21:	:
: Clifton Court Ferry	:b 24:	22:	18:	18:	19:	12:	:	:
: Stockton	:b 56:	:	60:	50:	56:	:	:	52:
: Garwood Bridge	:a 22:	23:	a 16:	a 18:	16:	ab 7:	:	:
: Williams Bridge	:b 9:	10:	:	a 12:	a 11:	7:	:	:
: Whitehall	:a 8:	9:	a 10:	a 12:	:	:	:	:
: Mossdale Bridge	:b 21:	25:	:	b 7:	21:	ab 20:	:	7:
Mokelumne River Delta								
: Southwest Point	:a 22:	a 5:	a 5:	18:	17:	ab 4:	a 7:	12:
: Camp 29 Staten Island	:a 27:	a 22:	a 16:	a 12:	15:	ab 10:	a 12:	8:

See footnotes last page of this table.

TABLE 144 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1934
 Samples taken by local observers approximately one and one-half hours
 after high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	NOVEMBER							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1760:	1740:	1740:	1800:	1740:	1720:	1540:	1360:
Bulls Head Point	:	:	1240:	:	1300:	1080:	620:	:
Bay Point	900:b	1000:	1060:	:	980:d	540:	220:	:
O and A Ferry	640:ab	480:	520:	440:ab	340:a	450:a	65:a	46:
Innisfail Ferry	920:	820:	:	740:	720:	500:	320:	300:
Sacramento River Delta								
Collinsville	470:	480:	480:	310:	260:	102:	46:	17:
Emmaton	190:	130:	136:	94:	72:	15:a	10:	5:
Three Mile Slough Bridge:ab	170:	110:	106:	68:ab	22:	:	:	:
Rio Vista Bridge	72:	39:b	12:	7:	:	:	:	:
Junction Point	25:	27:a	10:	5:	:	2:a	2:	:
Liberty Ferry	20:	11:	:	8:	7:	3:	:	4:
R. D. 2068	:d	94:	92:	:	44:	:	58:a	41:
Sacramento	:d	1:ab	1:a	1:	1:ab	1:a	1:a	1:
San Joaquin River Delta								
Antioch	420:	390:	180:	250:	240:	104:	37:	29:
Curtis Landing	:	:	:	:	:	:	56:	:
Jersey	200:	:	210:	150:	:	a	44:a	38:
Webb Pump	110:	92:	:	:	:	:	:	:
Dutch Slough	146:ab	122:	120:	:	d	88:ae	76:	:
Ward Landing	:	:	:	60:	52:	42:a	42:a	34:
Bacon Pump	74:	74:	72:	46:	50:	42:	27:	22:
Mandeville Pump	98:	:	d	72:	:	c	42:	:
King Island Pump	72:	68:	60:	56:	a	40:	37:	:
Rindge Pump	29:	23:a	28:	25:	a	20:a	20:	13:
Orwood Bridge	36:	30:	:	:	:	:	:	:
East Contra Costa I. D.	:	31:	26:	:	20:	19:a	15:	15:
Middle River P.O.	57:ab	39:a	38:	34:ab	22:a	21:a	17:	13:
Mansion House	20:	22:	13:	12:	14:	10:a	11:	8:
Stockton Country Club	:bd	25:ab	15:	:	:	:	:	:
Stockton	:	34:	36:	34:	32:	:	:	:
Mossdale Bridge	:ab	7:	6:a	6:ab	8:ab	8:a	7:a	7:a
Mokelumne River Delta								
Southwest Point	3:	:	:	:	:	:	:	:
Camp 29 Staten Island	9:	:	:	:	:	:	:	:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 144 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS, 1934
 Samples taken by local observers approximately one and one-half hours
 after high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	DECEMBER							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1520:	1620:	1620:	1540:	1380:	1480:	1500:	1420:
Bulls Head Point	:ab 610:	960:	:	:	:ab 540:	a 500:	:	:
Bay Point	: 440:d	510:b	510:b	510:	:	:	:	:
O and A Ferry	: 248:a	172:	162:	162:	90:	98:	90:	78:
Innisfail Ferry	: 370:	240:	350:	380:	300:	250:	290:	270:
Sacramento River Delta								
Collinsville	: 27:	77:	63:	26:	34:	26:a	20:	25:
Emmaton	: 5:ab	5:a	19:	:	:	:	:	:
Liberty Ferry	: 2:	1:a	2:	3:	2:	1:	:	:
R. D. 2068	:	43:a	42:	:	:	:	:	:
Sacramento	:ab 1:ab	1:a	1:	2:ab	1:	1:	1:	1:
San Joaquin River Delta								
Antioch	: 24:	35:	50:	46:	32:	27:	24:	19:
Central Landing	:	:	:	4:	:	:	:	:
Dutch Slough	:	36:	:	:	:	:	:	:
Ward Landing	: 34:	:	:	:	:	:	:	:
Bacon Pump	: 21:	:	:	:	:	:	:	:
Mandeville Pump	:	:a	26:	:	:	:	:	:
Rindge Pump	: 15:ab	17:a	17:	14:	14:a	14:	12:	:
Middle River P.O.	: 12:	15:a	12:d	13:	13:a	8:	11:	9:
Mossdale Bridge	: 5:	5:a	6:	7:	5:	4:	4:	3:

- a Low high tide.
 b Taken on following day
 c Taken two days later
 d Over one hour off scheduled time
 e Taken on preceding day
 f Taken two days earlier

TABLE 72

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours
 after high high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	JANUARY							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1440:	1460:	1320:	960:	1040:	1020:	1000:	1240:
Point Davis	:	:	:	410:	340:	410:	670:	890:
Bulls Head Point	:	720:	180:ab	26:ab	14:	71:	240:ab	380:
Bay Point	:	:	30:	36:b	6:	7:	63:	:
O and A Ferry	:	20:	6:	2:	5:	3:	5:	30:
Innisfail Ferry	:	228:	166:	70:	80:a	170:	126:	76:
Sacramento River Delta								
Collinsville	40:	4:	2:	1:	1:	2:a	1:	3:
Emmaton	:	:	3:cd	2:	3:	:	3:	2:
Sacramento	a	1:ad	1:	1:ab	1:a	1:	1:	2:
San Joaquin River Delta								
Antioch	b:	17:	18:	9:	8:	8:	7:	5: 4:
Jersey	:	:	:	9:	8:	:	:	:
Central Landing	:	:	:	4:	ab	2:a	2:	:
Dutch Slough	:	:	:	15:	15:	14:	12:	8: 10:
Rindge Pump	:	7:d	9:	4:	3:	4,a	1:	6: 6:
Middle River P.O.	:	:	:	9:	8:	7:	4:	5: 5:
Mossdale Bridge	:	:	:	1:	1:	1:a	3:	3: 2:

Station	FEBRUARY							
	2	6	10	14	18	22	26	
San Francisco, San Pablo and Suisun Bays								
Point Orient	1340:	1400:	1220:	1220:	1180:	960:	920:	
Point Davis	ab 880:	840:	580:	580:	620:	603:	480:	
Bulls Head Point	490:	440:a	140:ab	120:	200:	200:a	450:	
O and A Ferry	9:	5:	2:	2:	4:a	4:d	4:	
Innisfail Ferry	58:	74:	68:	84:	90:a	96:	48:	
Sacramento River Delta								
Collinsville	3:	3:	2:	1:	2:	3:	3:	
Emmaton	:	:	3:	1:	3:	3:	1:ad	4:
Sacramento	ab	1:	1:	1:ab	1:	1:	1:d	1:
San Joaquin River Delta								
Antioch	6:a	7:	4:	3:	4:	4:	5:	
Jersey	:	5:	5:	:	4:	5:	4:	
Central Landing	2:	:	3:	:	:	:	1:	
Dutch Slough	8:a	9:	9:	7:	7:	7:	7:	
Rindge Pump	6:	6:	4:	6:a	6:	6:	9:	
Middle River P.O.	ab	6:	6:	7:	5:a	6:	6:	5:
Mossdale Bridge	2:	3:ab	4:	2:a	2:	1:	3:	

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 72 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours
 after high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	MARCH							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1260:	1200:	880:	1000:	1060:	1140:	1000:	1160:
Point Davis	680:	560:	260:	360:	510:	360:	360:	700:
Bulls Head Point	:	44:a	10:	68:	202:	100:	70:ab	262:
O and A Ferry	6:a	2:	3:ab	5:	4:	3:	4:ab	5:
Innisfail Ferry	42:	:	86:	76:	64:ad	60:	50:	40:
Sacramento River Delta								
Collinsville	3:	1:a	1:	2:	2:	:	2:	6:
Emmaton	2:	1:	2:	3:ab	2:a	1:	2:	1:
Sacramento	ab 1:	1:	1:	ab	1:	3:	1:	3:
San Joaquin River Delta								
Antioch	3:	4:	5:	3:	4:	4:	3:	4:
Jersey	5:	:	5:	4:a	4:	5:	2:	:
Central Landing	2:	:	:	:	:	:	:	:
Dutch Slough	7:	6:	7:	7:a	7:	8:	7:	8:
Rindge Pump	4:	9:	3:	8:	6:	6:	4:	7:
Middle River P.O.	5:	7:	5:	7:	4:	6:	3:	:
Mossdale Bridge	3:	5:	2:	2:	2:	2:ab	3:	4:

Station	APRIL							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	:	1080:	740:	720:b	380:	760:	860:	840:
Bulls Head Point	:	150:	5:b	83:b	3:a	1:a	94:a	5:
O and A Ferry	a 3:	1:a	4:b	1:b	1:a	1:a	2:b	1:
Innisfail Ferry	a 50:a	66:	51:a	19:a	18:a	14:	20:a	16:
Sacramento River Delta								
Collinsville	a 1:	3:	2:	ab	1:a	2:	2:a	1:
Emmaton	a 3:a	1:	2:a	1:a	2:df	1:	1:a	1:
Sacramento	b 1:	1:	1:b	1:b	1:	1:	1:a	1:
San Joaquin River Delta								
Antioch	a 4:	2:	4:a	3:a	20:	3:	5:a	1:
Jersey	b 3:	:	:	:	:	:	:	:
Dutch Slough	b 7:a	6:	7:a	2:a	2:	2:	2:a	2:
Rindge Pump	b 11:	6:	2:a	1:	2:	1:	2:a	3:
Middle River P.O.	e 8:	6:	3:b	3:b	2:	1:	1:a	2:
Mossdale Bridge	b 4:ab	1:	1:a	2:	:	1:	2:a	1:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 72 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours
 after high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	MAY								
	2	6	10	14	18	22	26	30	
San Francisco, San Pablo and Suisun Bays									
: Point Orient	:b	560:	900:	560:	880:b	960:	920:	1080:	
: Bulls Head Point	:b	2:	32:a	12:b	40:	:	:	220:	140:
: O and A Ferry	:b	2:a	3:	1:b	4:b	3:	2:a	1:b	1:
: Innisfail Ferry	:a	17:	16:a	18:a	12:a	14:a	16:a	18:	
Sacramento River Delta									
: Collinsville	:a	2:	1:a	2:a	1:b	1:	2:a	1:a	1:
: Emmaton	:a	1:	1:a	1:a	2:a	1:	:a	1:	
: Sacramento	:b	1:	1:a	1:a	1:b	1:	1:a	1:b	1:
San Joaquin River Delta									
: Antioch	:a	4:	2:a	3:a	5:a	1:	1:a	2:a	1:
: Dutch Slough	:b	1:a	2:	:	:b	1:	4:	:a	2:
: Rindge Pump	:	:	4:a	2:a	2:b	4:	2:a	2:a	1:
: Middle River P.O.	:b	1:	3:a	2:a	1:b	4:ab	2:a	2:c	1:
: Mossdale Bridge	:ad	2:	2:a	1:a	1:b	1:	1:a	2:a	1:

Station	JUNE								
	2	6	10	14	18	22	26	30	
San Francisco, San Pablo and Suisun Bays									
: Point Orient	:b	1020:	940:	:	1180:b	960:	1220:	1320:	
: Bulls Head Point	:b	19:	60:a	18:b	194:b	360:	310:a	150:a	290:
: O and A Ferry	:b	2:a	2:a	1:b	1:a	1:	3:b	3:	
: Innisfail Ferry	:a	18:	17:a	14:a	17:a	11:	:a	13:a	17:
Sacramento River Delta									
: Collinsville	:a	1:	2:a	1:a	2:a	3:a	1:a	7:ab	1:
: Emmaton	:	1:	1:a	1:a	6:a	1:a	1:a	1:a	1:
: Sacramento	:b	1:	1:a	1:b	1:b	1:a	1:a	2:a	2:
San Joaquin River Delta									
: Antioch	:a	1:	2:a	3:a	2:a	3:a	1:a	5:a	3:
: Dutch Slough	:b	1:	2:a	9:a	1:a	2:a	6:a	2:a	3:
: Rindge Pump	:	3:	2:a	1:a	4:b	3:a	20:a	4:a	5:
: Middle River P.O.	:b	2:	4:a	2:b	1:b	3:a	2:a	2:	
: Mossdale Bridge	:b	1:	1:a	1:	2:b	1:a	2:a	3:a	3:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 72 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours
 after high high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	JULY								
	2	6	10	14	18	22	26	30	
	San Francisco, San Pablo and Suisun Bays								
Point Orient	b 1420:	1200:	a 1080:	1480:	1560:	1500:	1540:	b 1580:	
Point Davis	:	:	1020:	b 1120:	1020:	1180:	a 1200:	1300:	
Bulls Head Point	b 510:	420:	a 620:	b 800:	900:	800:	:	b 1060:	
Bay Point	:	:	:	:	:	:	:	a 450:	
O and A Ferry	ab 18:	11:	30:	b 136:	a 134:	180:	ab 290:	ab 290:	
Innisfail Ferry	a 18:	19:	20:	a 35:	172:	:	a 188:	b 310:	
	Sacramento River Delta								
Collinsville	:	5:a	4:a	4:a	20:	100:	62:ab	70:a	148:
Emmaton	b 4:a	4:a	1:a	3:	5:	2:a	5:a	7:	
Sacramento	b 1:a	2:a	2:b	2:	2:a	1:b	4:b	2:	
	San Joaquin River Delta								
Antioch	a 3:	3:a	3:a	10:a	36:a	32:a	40:a	64:	
Curtis Landing	:	:	:	:	:	:	:	a 40:	
Jersey	:	a 2:b	7:b	3:a	5:a	3:	:	:	
Dutch Slough	b 2:	2:a	4:	:	5:	5:a	5:a	7:	
Rindge Pump	b 5:a	6:a	7:b	9:	8:a	11:a	12:b	11:	
Middle River P.O.	b 2:b	4:a	3:b	4:	a 4:	4:a	5:b	8:	
Mossdale Bridge	b 4:a	4:a	7:a	2:ab	10:a	10:a	6:a	9:	

Station	AUGUST								
	2	6	10	14	18	22	26	30	
	San Francisco, San Pablo and Suisun Bays								
Point Orient	:	1480:	1580:	1600:	b 1700:	1700:	1700:	b 1580:	1660:
Point Davis	:	1180:	a 1260:	1300:	:	1420:	:	b 1380:	a 1400:
Bulls Head Point	:	860:	1020:	a 940:	ab 1060:	1140:	1200:	b 1180:	1000:
Bay Point	a 460:	a 520:	:	:	:	:	:	:	:
O and A Ferry	a 350:	480:	b 490:	b 520:	460:	520:	a 420:	ab 480:	
Innisfail Ferry	:	390:	a 320:	:	550:	a 560:	a 540:	a 560:	
	Sacramento River Delta								
Collinsville	:	184:a	156:a	228:a	282:a	320:a	310:	ab 370:	
Emmaton	:	13:a	13:a	15:a	40:	77:a	56:a	50:	88:
Three Mile Slough Bridge	:	8:	16:b	13:a	26:a	28:	50:b	60:	54:
Rio Vista Bridge	:	3:	3:b	3:b	5:	3:b	5:b	6:	7:
Sacramento	:	3:a	3:a	3:b	2:a	3:a	2:b	2:ab	3:
	San Joaquin River Delta								
Antioch	a 118:	82:a	118:a	220:	270:a	190:a	240:	230:	
Curtis Landing	a 64:	38:a	44:a	102:	88:a	124:	:	130:	
Jersey	:	33:a	10:a	19:a	46:	86:	:	:	
Webb Pump	:	:	:	b 8:	11:b	11:b	11:ab	13:	
Central Landing	b 7:	a 8:	8:a	5:	4:	:	:	4:	
Dutch Slough	:	5:	7:d	10:b	13:a	12:a	15:a	16:	18:
Bacon Pump	:	:	:	b 6:	7:b	6:a	8:	8:	
Rindge Pump	:	12:	16:a	13:bd	14:a	13:a	14:b	15:ab	14:
Middle River P.O.	a 6:ab	8:a	7:b	7:a	9:a	8:	ab 8:	8:	
Mossdale Bridge	:	12:a	9:a	12:a	10:	8:a	11:a	10:	10:

TABLE 72 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours
 after high high tide

Salinity expressed in parts of chlorine per 100,000 parts of water

Station	SEPTEMBER							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1720:	1690:	1660:	1680:	1600:	1660:	1700:	1660:
Point Davis	1400:	1420:	:	1380:	1460:	1500:	1320:	:
Bulls Head Point	1000:	1200:b	1220:	1260:	1180:a	900:	1060:	1000:
O and A Ferry	460:	520:a	440:a	440:	540:b	440:	420:	480:
Innisfail Ferry	560:	560:a	580:	640:a	600:	:	600:	720:
Sacramento River Delta								
Collinsville	a 340:	390:a	300:	280:a	240:a	280:	290:a	220:
Emmaton	a 82:a	68:	:	:	:	:	:	:
Three Mile Slough Bridge	40:	77:a	45:a	47:	54:a	39:	21:a	15:
Rio Vista Bridge	6:	5:b	4:	3:	12:	3:	3:	3:
Sacramento	a 3:a	2:b	3:a	3:a	2:b	1:ab	1:a	1:
San Joaquin River Delta								
Antioch	290:	270:a	220:	280:a	220:a	230:	200:	210:
Curtis Landing	180:	:	:	:	:	:	:	:
Jersey	a 36:a	38:	:	82:	:	:	:	:
Webb Pump	a 13:	11:b	12:	16:	13:b	13:	15:	12:
Central Landing	a 4:	:a	5:	:	:	:	6:a	5:
Dutch Slough	a 16:	:b	14:	20:	17:a	17:	21:	20:
Bacon Pump	:	8:b	10:b	11:	:	:	:	:
Rindge Pump	:	:a	17:a	18:a	15:a	16:a	15:	16:
Middle River P.O.	a 10:a	11:a	12:a	9:a	10:	:ab	11:a	11:
Mossdale Bridge	a 12:b	10:a	9:a	9:a	6:a	5:	6:a	5:

Station	OCTOBER							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1600:	1640:	1660:	1680:	1580:	1450:	1660:	1640:
Point Davis	1320:	:	1360:	1340:	:	1120:	1320:	1340:
Bulls Head Point	1060:	980:	980:	1140:	930:	:	980:	880:
Bay Point	:	:	:	:	:	:	480:	720:
O and A Ferry	370:	260:ab	220:	265:a	180:	220:	320:	:
Innisfail Ferry	620:a	580:	500:	460:	440:	420:	:	460:
Sacramento River Delta								
Collinsville	240:a	170:	210:a	130:a	100:	107:	100:a	88:
Emmaton	:	:	:	:	:	:	5:	6:
Three Mile Slough Bridge	17:	12:	9:	8:	5:	4:	:	:
Rio Vista Bridge	3:	:	3:	2:	2:	2:	4:	3:
Sacramento	a 1:a	1:ab	1:a	1:a	1:ab	1:ab	1:a	1:
San Joaquin River Delta								
Antioch	180:a	120:	140:	160:	57:	43:	64:	85:
Curtis Landing	:	:	:	:	:	:	23:	:
Jersey	:	:	:	:	:	13:	18:a	10:
Webb Pump	12:b	10:	9:	10:	8:cd	7:	10:	8:
Central Landing	:	:	4:	:	:	:	:	:
Dutch Slough	18:a	14:	13:	13:	11:	:	12:	:
Bacon Pump	:	:	:	:	:	:	:	7:
Rindge Pump	a 11:	11:	11:a	10:a	10:	9:	8:a	12:
Middle River P.O.	:	:	:	:a	9:a	7:	:	:
Mossdale Bridge	b 7:a	4:	5:	5:	5:	4:	7:a	6:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 72 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours
 after high high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	NOVEMBER								
	2	6	10	14	18	22	26	30	
San Francisco, San Pablo and Suisun Bays									
Point Orient	1600:	1600:		1520:	1540:	1420:		1540:	
Point Davis		1240:	abl200:	1160:	1220:	1200:	1220:	1120:	
Bulls Head Point		880:	1060:	880:	820:	ab 800:	a 880:	960:	
Bay Point	640:	ab 640:				700:		530:	
O and A Ferry	220:	290:	ab 180:	320:	a 216:	220:	200:	230:	
Innisfail Ferry		360:	390:		380:	360:	380:		
Sacramento River Delta									
Collinsville	a 90:	83:	ab 84:	a 88:	65:	85:	a 66:	a 114:	
Emmaton	5:	4:	6:		4:	2:	3:	a 3:	
Rio Vista Bridge	1:	3:	1:	1:	1:	3:			
Sacramento	a 1:	1:	ab 1:	a 1:	1:	ab 1:	a 1:	a 1:	1:
San Joaquin River Delta									
Antioch	62:	40:	77:	68:	38:	60:	83:	58:	
Jersey					12:	12:			
Webb Pump	7:	8:	6:	5:	5:	7:	7:	6:	
Dutch Slough					7:		8:	7:	
Rock Slough West of Dam	a 8:	5:	6:	7:	6:	7:	7:	a 6:	
Bacon Pump	7:	6:	6:	5:	7:	8:	6:	6:	
Rock Slough East of Dam		6:	6:	8:	7:	7:	6:	a 8:	
Rindge Pump	a 10:	9:	10:	a 11:	13:	12:		a 7:	
Middle River P.O.		9:	ab 6:	a 4:	7:	7:	a 7:		
Mossdale Bridge	b 6:	6:	ab 6:	a 8:		5:	a 4:	2:	

Station	DECEMBER								
	2	6	10	14	18	22	26	30	
San Francisco, San Pablo and Suisun Bays									
Point Orient	1560:	1620:	1680:	1520:	1520:	1540:	1600:	1480:	
Point Davis		1280:		1120:	1160:	1180:	1260:	1120:	
Bulls Head Point	940:	1060:	1180:	660:	a 700:		a 800:	820:	
Bay Point			660:						
O and A Ferry	260:	290:	320:	290:	140:	230:	a 120:	a 160:	
Innisfail Ferry	390:	410:	410:	420:	380:	360:	360:	340:	
Sacramento River Delta									
Collinsville	106:	113:	160:	a 56:	57:		74:	56:	
Emmaton	3:	1:	6:	a 3:	3:	2:	3:	a 1:	
Sacramento	1:	ab 1:	a 1:	1:	1:	ab 1:	a 1:	1:	
San Joaquin River Delta									
Antioch	58:		96:	22:	33:	61:	61:	37:	
Jersey	6:	18:		7:			6:	5:	
Dutch Slough	6:	6:	8:			10:	6:	6:	
Rock Slough West of Dam	7:	a	7:	7:	5:	5:	5:	5:	
Bacon Pump	ab 7:	6:	6:	9:	11:	6:			
Rock Slough East of Dam	6:	7:	a 6:	6:	6:	6:	5:	4:	
Rindge Pump	7:	8:	a 9:	a 10:	10:	7:	a 6:	8:	
Middle River P.O.	6:	12:	a 7:		7:	6:	a 5:		
Mossdale Bridge	bd 5:	3:	4:	a 4:	5:	5:	2:	5:	

a Low high tide. b Taken on following day. c Taken two days later.

TABLE 72

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours
 after high high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	JANUARY							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Point Orient	1480:	1520:	1440:	1000:	960:	:	1020:	1080:
Point Davis	:	:	940:	700:	127:	340:	480:	580:
Bulls Head Point	:	840:	:	270:	:	9:	80:	88:
Bay Point	:	250:	:	:	12:	6:	11:	:
O and A Ferry	120:	50:	3:	3:	1:	4:	4:	5:
Innisfail Ferry	:b	160:	120:	154:	64:	57:	41:	33:
	Sacramento River Delta							
Collinsville	26:	12:	4:	6:	1:	3:	1:	3:
Emmaton	:	2:	2:	1:	1:	1:a	1:	:
Sacramento	:	1:a	1:	1:	1:ab	1:	1:	1:
	San Joaquin River Delta							
Antioch	:ad	17:	10:	9:	6:	4:	3:	4:
Jersey	:	:	5:	:	:	:	a	3:
Dutch Slough	:	7:	7:	8:	8:	4:ab	9:	8:
Rindge Pump	:	9:	7:a	5:	:	3:	5:a	7:
Rock Slough West of Dam	:b	5:	7:	6:	8:	7:	9:	11:
Rock Slough East of Dam	:b	6:	6:	6:	7:	8:	7:	7:
Middle River P.O.	:	4:ab	6:a	5:	8:	8:ab	7:a	7:
Mossdale Bridge	:	:	4:	3:	3:	13:	5:	5:

Station	FEBRUARY							
	2	6	10	14	18	22	26	
	San Francisco, San Pablo and Suisun Bays							
Point Orient	1040:e	1160:	1040:	840:	640:	580:	500:	:
Point Davis	:	:	:	390:	320:	:	:	4:
Bulls Head Point	:b	140:	380:	:	37:	7:	:	8:
Bay Point	:	24:	:	:	:	:	a	:
O and A Ferry	:	3:	4:a	4:a	2:	2:	2:	:
Innisfail Ferry	:	25:	30:	40:	50:	27:	:	15:
	Sacramento River Delta							
Collinsville	:	2:	2:	1:	1:	2:	2:	1:
Emmaton	:	1:b	2:	1:	1:	:	1:a	1:
Sacramento	:ab	1:ab	1:a	1:	1:	1:ab	1:	1:
	San Joaquin River Delta							
Antioch	:	4:	:	3:	5:	8:	2:	3:
Jersey	:	3:	:	:	4:	:	:	:
Dutch Slough	:	8:a	7:a	6:	8:ab	6:	9:	3:
Rindge Pump	:	7:	:	:	:	:	:	:
Rock Slough West of Dam	:	7:	7:a	9:	10:	9:a	7:a	6:
Rock Slough East of Dam	:	7:	12:a	6:	8:	8:a	8:	13:
Middle River P.O.	:	:ab	7:	7:	5:	6:ab	4:a	2:
Mossdale Bridge	:	:	3:a	2:	4:	1:	2:	2:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 72 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours
 after high high tide.

Salinity expressed in parts of chlorine per 100,000 parts of water

Station	MARCH							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	640:	820:	680:	720:	1140:b	960:	1080:	1140:
Point Davis	:	160:	240:	270:	600:b	460:	:	490:
Bulls Head Point	:ab	4:ab	3:	5:	32:	:a	26:	138:a 160:
Bay Point	:	3:	2:a	4:	4:	:a	3:	: 9:
O and A Ferry	:	:	:	1:d	11:	1:a	1:	1:
Innisfail Ferry	:	23:	25:a	32:	:	36:a	33:a	31: 33:
Sacramento River Delta								
Collinsville	:	2:	1:	1:	4:	4:a	1:	1: 2:
Emmaton	:	1:ab	1:a	1:	:	1:a	1:	1: 1:
Sacramento	:	1:b	1:	1:	1:	1:b	1:	1: 1:
San Joaquin River Delta								
Antioch	:	2:	1:	2:	2:	5:a	1:	:a 2:
Dutch Slough	:	2:	3:	3:	4:	5:b	2:	2: 1:
Rock Slough West of Dam	:	6:	5:	4:b	5:	3:b	3:	3: 2:
Rock Slough East of Dam	:	3:	3:	2:b	3:	4:b	2:	3:d 2:
Middle River P.O.	:	3:	2:	2:	2:	:b	3:	5: 2:
Mossdale Bridge	:	1:	1:	1:	2:	2:b	1:	1: 2:

Station	APRIL							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	:	1120:b	800:	1000:	1160:	1120:b	1000:	940: 960:
Point Davis	:	:b	560:	420:	440:b	520:b	340:	194: :
Bulls Head Point	:b	286:b	230:	:	110:b	178:b	198:	25: :
Bay Point	:a	5:	:a	3:	2:a	3:	:	1:a 1:
O and A Ferry	:b	2:	2:a	2:a	2:b	1:a	2:	1:a 1:
Innisfail Ferry	:a	40:a	39:a	39:	38:a	33:a	29:a	24:a 22:
Sacramento River Delta								
Collinsville	:a	1:a	1:a	1:	1:a	1:a	1:a	1:a 1:
Emmaton	:a	1:a	1:	1:	2:a	1:b	2:a	1: 1:
Sacramento	:b	1:b	3:	1:	1:b	1:b	3:	1:a 1:
San Joaquin River Delta								
Antioch	:a	2:a	1:a	2:	2:a	3:a	3:	1:a 2:
Jersey	:	:	:	:	:	:a	2:	: :
Dutch Slough	:b	6:b	3:	4:	2:b	4:b	2:	1:a 1:
Rock Slough West of Dam	:b	2:b	3:	4:	4:b	3:b	2:a	7:a 1:
Rock Slough East of Dam	:b	1:b	4:	5:	2:b	2:b	2:a	1:a 1:
Middle River P.O.	:b	5:b	5:	:	4:	:b	3:b	2: :
Mossdale Bridge	:b	4:b	1:ab	3:	4:b	1:b	1:	1:a 1:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 72 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours
 after high high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	MAY								
	2	6	10	14	18	22	26	30	
San Francisco, San Pablo and Suisun Bays									
Point Orient	980:	1000:	980:	900:	1060:		1180:a	860:	
Point Davis	b 560:						680:	460:	
Bulls Head Point	b 450:b	110:	108:a	66:b	164:b	400:	50:		
Bay Point	a 2:		a 2:				2:a	6:	
O and A Ferry	a 5:a	1:	1:	1:b	2:b	1:	1:b	2:	
Innisfail Ferry	a 21:a	20:a	21:a	26:a	22:a	19:a	13:a	19:	
Sacramento River Delta									
Collinsville	a 3:a	1:a	2:a	1:a	4:a	1:a	1:	1:	
Emmaton	a 1:	1:	3:a	3:b	1:		a 1:	1:	
Sacramento	b 1:b	1:	1:a	1:b	1:b	1:a	1:a	1:	
San Joaquin River Delta									
Antioch	a 2:bd	1:	1:a	3:a	1:a	1:a	3:a	3:	
Dutch Slough	b 1:b	1:	1:	a 1:b	3:b	1:b	2:	2:	
Rock Slough West of Dam	b 1:b	1:	2:a	1:b	1:b	1:a	2:a	3:	
Rock Slough East of Dam	b 1:b	2:	2:a	2:b	1:b	1:a	1:a	2:	
Middle River P.O.		b 1:b	2:a	1:b	1:	a 2:			
Mossdale Bridge	b 1:b	1:	1:a	1:b	1:b	2:b	1:b	2:	

Station	JUNE								
	2	6	10	14	18	22	26	30	
San Francisco, San Pablo and Suisun Bays									
Point Orient	1160:b	1180:		1380:b	1260:	1000:	1100:	1240:	
Point Davis	b 620:		580:	680:		620:		940:	
Bulls Head Point	b 390:b	560:	220:	390:b	340:	100:	380:		
Bay Point	a 3:a	5:	3:	4:a	5:a	7:	a 70:		
O and A Ferry	b 2:b	1:	1:	3:b	2:a	3:	3:a	4:	
Innisfail Ferry	a 19:a	15:a	16:a	22:		8:	a 16:		
Sacramento River Delta									
Collinsville	a 2:a	1:a	1:a	1:		2:	1:bd	3:	
Emmaton	a 1:b	1:a	2:a	2:a	1:	1:	3:a	1:	
Sacramento	b 1:b	1:a	1:a	1:b	1:	1:a	1:a	1:	
San Joaquin River Delta									
Antioch	a 1:a	2:	1:a	1:a	1:a	2:a	1:a	1:	
Jersey				a 1:	1:a	2:a	3:		
Dutch Slough	b 1:b	2:	1:	b 4:	2:				
Rock Slough West of Dam	b 1:b	1:a	1:a	1:b	1:	2:a	1:a	2:	
Rock Slough East of Dam	b 1:b	2:a	1:a	2:b	1:	3:a	2:a	2:	
Middle River P.O.	b 1:b	1:a	2:a	1:ab	1:	1:a	2:		
Mossdale Bridge	b 1:b	1:b	5:b	1:b	1:	1:b	1:a	1:	

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 72 (CONTINUED)
 SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours
 after high high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	JULY									
	2	6	10	14	18	22	26	30		
	San Francisco, San Pablo and Suisun Bays									
Point Orient	:b	1380	:b 1360	: 1360	: 1440	:b 1460	: 1440	: 1540	: 1600	
Point Davis	:	:	:	: 940	: 1040	:b 1160	: 1080	: 1260	: 1360	
Bulls Head Point	:b	660	:b 660	: 660	: 660	:b 840	: 740	: 940	:b 980	
Bay Point	:	:a	: 98	: 220	:a 200	:a 380	: 400	: 420	:a 540	
O and A Ferry	:a	9	:b 11	: 65	:b 190	:ab 220	: 220	: 240	:b 340	
Innisfail Ferry	:	:a	: 22	: 35	:a 52	:a 95	:a 162	:a 132	:	
	Sacramento River Delta									
Collinsville	:a	3	:b 9	:a 3	:a 8	:a 47	:a 70	:a 108	:a 94	
Emmaton	:b	2	:b 8	: :a	: 1	:b 3	: :a	: 3	:a 5	
Three Mile Slough Bridge	:	:a	: 1	: :a	: 4	:b 1	: 2	:a 4	:b 5	
Rio Vista Bridge	:	:a	: 2	: 1	:a 2	:b 1	: 2	: 2	:b 2	
Sacramento	:b	1	:b 1	:a 1	:b 3	:b 2	:a 2	:a 1	:a 2	
	San Joaquin River Delta									
Antioch	:a	2	:a 5	:a 2	:a 9	:a 23	: 36	: 91	: 69	
Jersey	:	:	:	:a 2	: :a	: 5	:a 7	:a 7	:	
Central Landing	:	:	:	:	:	:	:	:	: 3	
Dutch Slough	:b	1	:b 7	: 4	:b 2	:b 4	: 4	:b 1	:	
Rock Slough West of Dam	:b	2	:b 1	:a 2	:a 2	:b 3	:a 3	:a 4	:a 6	
Rock Slough East of Dam	:b	1	:b 1	:a 4	:a 3	:b 4	:a 4	:a 6	:a 5	
Middle River P.O.	:a	2	:b 2	:a 2	: :b	:a 4	: 2	:	: 7	
Mossdale Bridge	:b	3	:b 3	:b 4	:b 6	:b 7	:b 9	:b 14	:b 13	
	AUGUST									
	San Francisco, San Pablo and Suisun Bays									
Point Orient	:b	1620	: 1580	: 1600	: 1640	:b 1640	: 1580	: 1640	: 1680	
Bulls Head Point	:b	860	: 1040	: 1100	:b 1060	:b 1000	: 1080	: 1220	:b 1080	
Bay Point	:ad	520	: 640	: 740	:	:	: 640	:a 740	:	
O and A Ferry	:b	340	: 380	: 440	:b 320	:a 440	: 560	:a 580	:a 480	
Innisfail Ferry	:a	232	:a 284	:a 330	:	: :a	: 430	:a 490	:a 510	
	Sacramento River Delta									
Collinsville	:cd	110	:a 168	:a 144	:bd 210	:ab 290	: 240	:a 220	:a 300	
Emmaton	:b	9	: :a	: 16	:a 23	:b 54	:	: 44	:	
Three Mile Slough Bridge	:b	7	:a 9	: 21	:b 32	:b 30	: 37	: 56	:b 48	
Rio Vista Bridge	:b	2	: 8	: 4	:b 2	:b 4	: 4	:b 2	:b 4	
Sacramento	:b	2	:a 2	:a 1	:b 2	:b 2	:a 2	:a 2	:b 3	
	San Joaquin River Delta									
Antioch	:a	88	: 120	:a 82	:a 160	:a 170	: 210	:a 220	:ab 210	
Curtis Landing	:	:	:	:	:a 108	:a 78	:	:	:	
Jersey	:	:a	: 16	:a 11	:a 24	: :a	: 27	: :a	: 66	
Webb Pump	:	:	:	:	:	:	:a	: 9	:a 12	
Central Landing	:	:	:	:a	: 7	:a 4	: :a	: 4	:	
Dutch Slough	:b	7	: 7	:b 11	:b 11	: 9	: 9	:b 10	:b 14	
Rindge Pump	:	:	:	:	:b 13	:a 16	:a 15	:a 16	:	
Rock Slough West of Dam	:b	4	:a 5	:a 4	:a 4	:b 5	:a 5	:a 6	:b 7	
Rock Slough East of Dam	:b	4	:a 4	:a 4	:a 4	:b 5	:a 6	:a 6	:b 5	
Middle River P.O.	:abd	5	:bd 5	: :ad	: 5	:ab 6	: :a	: 6	:	
Mossdale Bridge P	:b	11	:b 11	:b 11	:b 10	:b 11	:b 11	:b 10	:b 9	

a b c d e f See footnotes last page of this table.

TABLE 72 (CONTINUED)
 SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours
 after high high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	SEPTEMBER							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1660:	1660:	1620:	1660:	1680:	1640:	1640:	1740:
Point Davis	:	:	:	:	1320:	:	1420:	1420:
Bulls Head Point	1200:	1060:	1160:ab	960:	:	:	:	:
Bay Point	:	820:a	800:	:	:	720:	:	680:
O and A Ferry	480:	560:a	440:ab	400:a	470:	500:b	480:	380:
Innisfail Ferry	560:ab	520:	:	540:	580:	:	b 560:a	560:
Sacramento River Delta								
Collinsville	290:a	260:a	300:	250:	260:a	270:a	280:bd	280:
Emmaton	ab 47:a	44:a	48:	:	38:	:	a 20:	:
Three Mile Slough Bridge	50:	48:b	57:	29:	40:	32:b	17:	17:
Rio Vista Bridge	6:	3:	.8:	5:	3:	4:abd	5:	3:
Sacramento	ab 3:a	1:a	2:ab	2:a	1:a	4:a	2:	1:
San Joaquin River Delta								
Antioch	260:	270:a	160:	150:ad	190:a	200:a	130:	190:
Jersey	ab 78:	:	a 36:	40:a	37:	:	:	29:
Webb Pump	16:	11:a	14:	13:	11:a	14:d	13:	11:
Central Landing	:	:	a 5:a	3:	:	:	:	:
Dutch Slough	15:	21:b	19:	16:	17:	:	:	:
Rindge Pump	14:a	17:a	15:	15:a	16:a	18:a	20:	18:
Rock Slough West of Dam	8:a	7:a	9:	8:a	10:a	11:a	10:	11:
Rock Slough East of Dam	7:a	8:a	9:	8:a	11:a	10:a	10:	11:
Middle River P.O.	:	:	a 10:ab	9:	:	a 11:abd	12:	10:
Mossdale Bridge	ab 10:ab	9:b	8:	:	a 6:a	9:a	8:a	7:

Station	OCTOBER							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1680:	1560:	1640:a	1580:	1640:	1600:	1560:	1700:
Point Davis	1440:	1280:	1320:	:	:	1300:	:	:
Bulls Head Point	1340:	1060:ab	1000:ab	880:	1060:	880:ab	800:ab	940:
Bay Point	960:	:	:	:	:	:	:	:
O and A Ferry	540:	260:ab	330:	360:	340:	280:	300:	360:
Innisfail Ferry	540:	500:	500:	500:	540:	:	480:	460:
Sacramento River Delta								
Collinsville	b 250:a	140:	162:	166:a	128:a	134:	110:	204:
Emmaton	26:a	11:a	18:	a 8:	:	:	6:ab	10:
Three Mile Slough Bridge	21:	12:	12:	7:	13:	8:	6:	7:
Rio Vista Bridge	4:	1:	1:	1:	1:	1:	1:	2:
Sacramento	a 2:a	1:	1:ab	1:a	1:ab	1:	1:ab	2:
San Joaquin River Delta								
Antioch	a 116:a	120:	112:	224:	130:	94:	94:	170:
Jersey	:	a 13:	:	14:	a 13:	:	:	32:
Webb Pump	:	a 10:	10:	8:a	8:e	9:	8:	7:
Dutch Slough	:	:	10:	9:	10:	9:	:	:
Rindge Pump	a 15:a	14:	11:	13:a	10:a	10:	9:	8:
Rock Slough West of Dam	:	a 10:	9:	10:a	10:a	9:	9:	8:
Rock Slough East of Dam	:	a 10:	10:	9:a	7:a	7:	6:	7:
Middle River P.O.	:	:	10:	:	a 10:	a 7:d	10:	7:
Mossdale Bridge	:	b 6:	4:a	5:	6:	5:b	7:	8:

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 72 (CONTINUED)
 SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours
 after high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	NOVEMBER							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1640:	1500:	1620:	1580:	1600:	1480:	1620:	1590:
Point Davis	1300:	:	1260:	1220:	1120:b	1260:	:	:
Bulls Head Point	:	a 820:	ab 900:	a 940:	1020:	1000:	1100:	900:
Bay Point	:	:	600:	:	:	:	:	:
O and A Ferry	300:	300:	ab 260:	340:	260:a	278:ab	216:	480:
Innisfail Ferry	460:	420:	420:	440:	460:	460:	460:	:
Sacramento River Delta								
Collinsville	a 128:	108:	140:	156:a	94:b	134:	100:	262:
Emmaton	a 6:	8:	1:	4:	a 6:	:	:	:
Three Mile Slough Bridge	b 7:	4:	3:	:	4:	4:	4:	4:
Rio Vista Bridge	:	2:	1:	1:	1:	1:	1:	1:
Sacramento	a 1:	1:ab	1:a	1:a	1:	2:ab	1:a	1:
San Joaquin River Delta								
Antioch	168:	74:	94:	112:a	60:	72:	112:	88:
Jersey	:	:	13:	:	:	:	:	:
Webb Pump	:	ab 7:a	6:	:	:	:	d 7:	7:
Dutch Slough	9:	7:	8:	9:	10:	7:	8:	8:
Rindge Pump	a 9:	10:	10:a	11:a	13:	8:	8:a	9:
Rock Slough West of Dam	a 7:	6:	7:	7:	8:	9:	8:	8:
Rock Slough East of Dam	a 7:	6:	7:	6:	8:	8:	7:	6:
Middle River P.O.	:	7:	a 7:	7:a	10:	:	8:	:
Mossdale Bridge	7:	7:	:	5:	4:	5:	6:	7:

Station	DECEMBER							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1640:	1560:	1560:	1560:	1480:	1520:	1600:	:
Point Davis	d 1200:	1200:	1240:	:	1120:	1140:	:	1200:
Bulls Head Point	1040:	920:ab	780:a	780:	880:a	760:ab	860:	1020:
Bay Point	:	380:	:	500:	380:	380:	:	:
O and A Ferry	a 200:	525:	220:	300:	200:	260:	250:	:
Innisfail Ferry	400:	460:	:	420:	:	400:	380:	360:
Sacramento River Delta								
Collinsville	a 122:	94:	116:	146:a	56:	68:	a 38:	38:
Emmaton	:	6:	a 5:	5:a	4:	3:	3:a	4:
Sacramento	a 1:	1:ab	1:a	1:a	1:	1:ab	1:a	1:
San Joaquin River Delta								
Antioch	a 98:	58:	74:	:	48:	44:	131:	65:
Jersey	:	:	10:	:	:	:	a 5:	5:
Webb Pump	d 7:	:	a 1:	:	:	:	ab 4:	4:
Dutch Slough	7:	6:	8:	8:	9:	9:	7:	8:
Rindge Pump	7:	9:	7:a	9:a	6:	12:	7:a	8:
Rock Slough West of Dam	a 8:	7:	7:a	7:a	7:	7:	6:	5:
Rock Slough East of Dam	a 5:	7:	7:a	6:a	6:	4:	5:	5:
Middle River P.O.	:	7:	ab 6:	:	4:	:	:	:
Mossdale Bridge	b 4:	4:	2:	2:	:	3:	4:	4:

a Low high tide.

b Taken on following day.

c Taken two days later.

d. Over 1 hour off scheduled time.

e Taken on preceding day.

f Taken two days earlier.

TABLE 72

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high tide
Salinity expressed in parts of chlorine per 100,000 parts of water
1937

Station	JANUARY							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1460		1540	1480	1480	1460	1540	1440
Point Davis		1060	1120	1120	920		1000	1020
Bullshead Point	560	ab 460	ab 620	800	720	ab 580	ab 620	a 500
Bay Point		280						
O and A Ferry	a 60	150	190	160	72	94	88	a 100
Innisfail Ferry	b 360	320	260		290	140	160	224
Sacramento River Delta								
Collinsville		62	83	34	15	13	36	10
Emmaton		4	a	5	3	ab 1		4
Sacramento	1	1	ab 1	a 1	1	b 1	b 1	1
San Joaquin River Delta								
Antioch	22	21	22	11	a 11	10	18	9
Jersey					5			
Webb Pump	6		d 4	4	4	5	3	6
Dutch Slough	8	8	7	7	6	6	7	8
Rindge Pump	8	7	6	a 6	6	6	ab 5	7
Rock Slough West of Dam	6	5	6	a 5	6	7	ab 5	6
Rock Slough East of Dam	6	4	7	a 5	4	6	ab 7	5
Middle River P.O.			ab 5		4	5	ab 4	5
Mossdale Bridge	4	5	3	4	4	3	3	4

Station	FEBRUARY							
	2	6	10	14	18	22	26	
San Francisco, San Pablo and Suisun Bays								
Point Orient	1400	1200	960	1080	540	980	720	
Point Davis	820	660	480	520			260	
Bullshead Point	a 300	ab 150		204	a 4	ab 71	18	
Bay Point			4		b 1		a 2	
O and A Ferry	15	18	ab 2	a 3	a 5	1	a 4	
Innisfail Ferry	194	98	102	a 98	68	38	a 23	
Sacramento River Delta								
Collinsville	4	2	1	ad 1	1	1	1	
Emmaton	2	2	ab 1			1	ab 2	
Sacramento	1	ab 1	ab 1	1	1	1	ab 1	1
San Joaquin River Delta								
Antioch	a 4	5	3	4	4	3	a 2	
Webb Pump	ab 6	5	ab 5	a 5	4		2	
Dutch Slough	6	7	5	5	3	3	4	
Rindge Pump	13	2	2	2	9	1	1	
Rock Slough West of Dam	6	6	9	8	10	6	5	
Rock Slough East of Dam	7	7	6	5	5	5	3	
Middle River P.O.	7	7			3			
Mossdale Bridge	3	4	d 28	6	1	1	5	

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 72 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours after high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water
 1937

Station	MARCH							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	940	780	1200	1160	760	720		520
Point Davis	320	a 560	620	580	180	ab 90	b 60	90
Bullshead Point	79	ab 238	a 330	250	4	ab 3	b 4	3
Bay Point		20		7		a	3	a 2
O and A Ferry	a 3	4	ab 3	a 1	1	ab 6	b 1	a 1
Innisfail Ferry	55	35	47	a 43		44	a 26	ab 23
Sacramento River Delta								
Collinsville	1	3	2	a 1	1	1	a 1	ab 1
Emmaton	3	2	ab 1	1	1	1	a 1	ab 1
Sacramento	1	1	ab 1	2	1	ab 1	1	b 1
San Joaquin River Delta								
Antioch	5	4	a 3	2	2	1	a 2	ab 3
Jersey		5	4			3	a 3	ab 2
Webb Pump	2	ab 2	2		1	1	a 3	ab 2
Dutch Slough	3	3	4	3	3	3	b 3	3
Rindge Pump	2	4	4	5	6	4	b 3	2
Rock Slough West of Dam	4	5	5	4	5	3	b 5	10
Rock Slough East of Dam	4	4	4	4	5	4	b 5	7
Middle River P.O.							a 5	2
Mossdale Bridge	2	2	2	1	1	1	a 1	1

Station	APRIL							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	980	780	b 1100	920	860	b 960	b 1020	940
Point Davis	120	a 330		360	300	b 200		200
Bullshead Point	4	b 100	b 56	24	87	b 50	b 76	26
Bay Point		a 3	a 1			a 1	a 1	
O and A Ferry	2	b 3	b 3	2	1	a 2	a 2	1
Innisfail Ferry		24	a 27	a 29	a 29	a 24	a 20	a 20
Sacramento River Delta								
Collinsville	4	a 4	a 1	6		a 1	d 3	1
Emmaton		a 1	b 1	a 1		a 2		1
Sacramento	1	a 1	b 1	1	a 1	b 1	b 1	1
San Joaquin River Delta								
Antioch	2	a 3	a 3	a 2	a 3	a 2	a 2	2
Jersey		a 3		4				
Webb Pump		b 3		3	ad 1	abd 3	b 2	1
Dutch Slough	4	b 3	b 4	3	b 2	b 2	b 2	2
Rindge Pump	2	b 3		3	a 3	a 2	b 2	2
Rock Slough West of Dam	6	a 6	b 7	5	a 4	a 4	b 3	1
Rock Slough East of Dam	8	a 5	b 6	2	a 3	a 3	b 2	4
Middle River P.O.	3	a 2	b 2	3	a 1	b 3		
Mossdale Bridge	1	b 2	b 3	ab 1	b 1	b 2	b 1	1

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 72 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours after high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water
 1937

Station	MAY							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Point Orient	840	1200	1160	1060	900	1020	860	1000
Point Davis		540	330	420	260	560	200	
Bullshhead Point	50	330	120	170	50	254	14	4
Bay Point	2	2		1	2	1	3	1
O and A Ferry	4	2	1	4	1	1	1	1
Innisfail Ferry	19	16	15	11	14	13	12	11
	Sacramento River Delta							
Collinsville	1	1	2	1	3	1	1	1
Emmaton	2	1	1	1		1		1
Sacramento	1	1	1	1	1	1	1	1
	San Joaquin River Delta							
Antioch	2	1	4	1	1	1	2	1
Jersey		1						
Webb Pump		5	3			3	1	
Dutch Slough	2	1	1	1	1	1	1	1
Rindge Pump	2	3	3	1	2	2	1	1
Rock Slough West of Dam	1	3	2	2	2	1	1	1
Rock Slough East of Dam	3	5	1	1	1	1	1	1
Middle River P.O.	2	1	1	1	1	1	1	1
Mossdale Bridge	1	1	1	1	3	1	1	1

Station	JUNE							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Point Orient	860	1280		980	1080	1000	860	1200
Point Davis	540				500	580		
Bullshhead Point		280	260	290	220	350	280	720
Bay Point		3			3	4		46
O and A Ferry	1	1	1	1	2	2	1	4
Innisfail Ferry	13	8		8	14		17	
	Sacramento River Delta							
Collinsville	1	1	1	1	1	1	1	1
Emmaton		1	1	1	1	2	1	1
Sacramento	1	1		1	1	1	1	1
	San Joaquin River Delta							
Antioch	1	1	2	1	1	1	1	2
Jersey		1						
Webb Pump		1	3		1			
Dutch Slough	1	1	2	2	1	2	1	2
Rindge Pump	4	1	3	1	3	1	1	4
Rock Slough West of Dam	1	1	1	1	1	2	1	5
Rock Slough East of Dam	1	1	1	1	2	1	1	1
Middle River P.O.	1	1	1	2	3	1	1	3
Mossdale Bridge	1	1	1	2	1	1	2	

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 72 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours after high high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water
 1937

Station	JULY							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1180	1400	1240	1500	1380	b 1520	1420	1600
Point Davis		b 920		960	1100	b 1220	1080	1160
Bullshhead Point	660	b 760	700	620	720	b 920		1000
Bay Point	a 40	a 242	a 200	a 230			a 480	a 540
O and A Ferry		b 72	a 64	a 72	a 82	a 138	a 370	a 192
Innisfail Ferry	12	a 18	a 65	106	a 90	a 130	a 160	d 260
Sacramento River Delta								
Collinsville	a 3	a 12	34	a 20	a 26	a 86	a 92	a 96
Emmaton		a 1	3		a 2		a 4	a 9
Three Mile Slough Bridge			1	2	b 2	b 3	a 3	a 6
Rio Vista Bridge			2	1	2	b 2	a 1	a 2
Sacramento	a 1	1	8	a 2	a 1	b 1	1	a 2
San Joaquin River Delta								
Antioch	a 1	a 4	13	a 8	a 12	a 29	a 36	a 52
Jersey		a 1						a 6
Webb Pump				a 2		ab 2		a 4
Opposite Central Landing			3	ad 2	abd 3	b 2		ad 3
Dutch Slough	b 1	b 3	5	3	b 3	b 2		ad 3
Rindge Pump	a 4	a 4	5	a 6	a 6	b 7	a 8	a 11
Rock Slough West of Dam	a 2	b 2	2	a 3	a 2	b 3	a 3	a 4
Rock Slough East of Dam	a 1	b 2	4	a 4	a 3	4	3	a 4
Middle River P.O.	a 4		3	a 4	a 5	b 4		5
Mossdale Bridge	b 5	b 4	5	b 8	t 9	b 10	10	b 12

Station	AUGUST							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1540	b 1640	1540	1700	1600	b 1620	1580	1640
Point Davis			1260		e 1340		11360	
Bullshhead Point	1020	b 1140	960	1080	b 1000	b 1060	1020	1220
Bay Point	a 460	a 560	a 560	a 740	a 700		800	780
O and A Ferry	b 320	a 360	a 310	500	a 400	a 460	560	660
Innisfail Ferry	a 230	a 310	360	460	a 410	a 520	540	
Sacramento River Delta								
Collinsville	a 148	a 235	235	a 260	a 350	b 360	a 350	a 400
Emmaton		a 13	40		a 46	b 98		a 98
Three Mile Slough Bridge		b 20	24	43	b 53	b 70	88	
Rio Vista Bridge	b 2	b 3	4	5	b 8	b 6	15	b 30
Sacramento	b 3	b 13	a 6	a 3	b 3	b 4	a 1	a 4
San Joaquin River Delta								
Antioch	a 73	a 130	168	a 150	a 200	a 270	350	a 280
Jersey					a 32			
Webb Pump	4	b 9	a 7		a 8	b 21		a 20
Opposite Central Landing	4	a 3		a 5	ab 7	b 6	a 7	
Dutch Slough	b 5	b 1	8	b 14	b 14		26	ab 26
Rindge Pump	11	b 13	a 13	a 14	a 14	b 14	a 15	15
Rock Slough West of Dam	5	b 5	a 6	a 5		b 7	a 8	a 7
Rock Slough East of Dam	4	b 4	a 5	a 6	a 7	b 7	a 8	a 8
Middle River P.O.	a 6	b 5	a 9	a 7		b 7	a 8	
Mossdale Bridge	b 11	b 10	b 11	b 12	b 11	b 11	b 12	b 9

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 72 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours after high high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water
 1937

Station	SEPTEMBER							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1680	1640	1600	1600	1620	1640	1620	1680
Point Davis		ab1360	1360	1360	b 1460	1440	1310	1360
Bullshead Point	b 1180	1100	1060	1060	b 1100	1180	1270	
Bay Point	a 860	800				920		
O and A Ferry	b 580	ab 640	580	a 520	b 600	600	d 600	a 500
Innisfail Ferry	ab 580		640	620	a 660		580	a 700
Sacramento River Delta								
Collinsville	410	ab 410	a 340	380		490	a 280	a 330
Emmaton	a 102		a 84		a 62	100	96	
Three Mile Slough Bridge	b 120	114	b 104	b 100	b 90	100	58	a 56
Rio Vista Bridge	b 30	22	b 33	b 24	b 13	17	23	
Sacramento	e 5	ab 4	a 4	a 3	bb 4	a 4	a 1	
San Joaquin River Delta								
Antioch	ae 320	310	290	a 310	a 330	310	320	a 240
Jersey	a 92	abd 94	a 68	a 74		ad 102		
Opposite Jersey	a 92	90	116	a 88	a 88	136		
Webb Pump		12	a 18		a 22	a 25		a 15
Opposite Central Landing	b 10	bd 10	a 9	a 8	b 12	a 11	a 8	a 10
Dutch Slough	a 27	20	24	b 25	b 28	23		
Rindge Pump	a 15	b 16	a 16	a 15	b 20	a 15	17	
Rock Slough West of Dam	b 7	ab 8	a 8	a 10	b 9	10	ad 13	a 12
Rock Slough East of Dam	b 8	ab 8	a 9	a 10	b 8	10	a 12	a 11
Middle River P.O.	b 16	ab 8	a 9	a 9	a 10	a 10	10	
Mossdale Bridge	b 10		b 9	b 9	b 7	b 7	b 7	a 7

Station	OCTOBER							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1680	1620	1560	1560	1480	1420	1520	1480
Point Davis	1340	1300		a 1240	1240	1320	1200	1280
Bullshead Point	ab1100	1080	800	a 980	ab 860	1000	820	ab 760
Bay Point		660		640		b 500		
O and A Ferry	500	a 260	a 280	a 300	310	a 350	a 210	200
Innisfail Ferry	700		560	560	500	440	a 460	410
Sacramento River Delta								
Collinsville	330	280	a 180	180	140	a 94	a 114	96
Emmaton		10	a 11		8		a 4	
Three Mile Slough Bridge	abd 40	a 7	6	8	8	6	5	5
Rio Vista Bridge	5	5	2	2	2	2	3	1
Sacramento	2	a 2	1	1	ab 1	a 1	a 1	ac 1
San Joaquin River Delta								
Antioch	240	170	a 120	108	166	b 118	36	73
Jersey		a 42		19		d 15		
Webb Pump		a 13	a 12	12		9	a 8	
Opposite Central Landing	8	a 6	a 3	6	3	6	a 5	5
Dutch Slough	ae 25	a 25	16	14	13	13	11	10
Rindge Pump	13	a 13	a 11	12	11	a 11	a 13	10
Rock Slough West of Dam	13	a 11	a 11	10	9	10	a 9	8
Rock Slough East of Dam	13	a 10	a 9	9	8	9	a 7	7
Middle River P.O.	11	a 12	a 9	7	7	a 7	d 8	6
Mossdale Bridge	d 6		b 6	7	5	7	b 5	7

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 72 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours after high high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water

1937

Station	NOVEMBER							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Point Orient		1440	1600		1500	1380	b 1080	1360
Point Davis			1160		1260	1100	940	
Bullshead Point	ab 700	880	a 880		960	ab 600	760	a 200
Bay Point		400			60			16
O and A Ferry		320	150	160	90	12		1
Innisfail Ferry	400	a 420	360		280	150	120	102
	Sacramento River Delta							
Collinsville	92		36	49	41	a 2	2	
Emmaton	ab 3		4		2	ab 2		0
Three Mile Slough Bridge	5	4	3	2	2	2	1	2
Rio Vista Bridge	2	1	1	2	0	1	0	1
Sacramento	ab 1	a 1	2	ab 1	ab 1	a 1	1	0
	San Joaquin River Delta							
Antioch	56	42	34	28	31	7	d 5	4
Jersey		a 7	8		ab 5			d 3
Webb Pump	ab 8	a 7	d 6				7	
Opposite Central Landing	ab 3	a 3	5	ab 4	4	a 4	4	0
Dutch Slough	10	a 9	10	9	8	9	9	7
Rindge Pump	10	a 11	10	10	12	a 13	12	11
Rock Slough West of Dam	8	a 9	10	8	8	a 9	9	8
Rock Slough East of Dam	7	a 8	9	7	8	a 9	d 8	7
Middle River P.O.	ab 7		7	ab 7	ab 6		9	
Mossdale Bridge	9		8	9	6	b 8	8	6

Station	DECEMBER							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Point Orient	1210	1260	1220	860	760	1000	780	1100
Point Davis	600	620	760	160	100	180	320	540
Bullshead Point	ab 70	320	a 580	ab 6	a 3	4	280	ab 120
Bay Point	11							
O and A Ferry	ab 1	a 2	19	4	a 1	a 2	1	2
Innisfail Ferry	78	64	58	112	28	36	38	30
	Sacramento River Delta							
Collinsville	1	a 3	2	0	1	2	6	d 1
Emmaton					a 1	1		2
Three Mile Slough Bridge	1	1						
Rio Vista Bridge	1	0						
Sacramento	ab 1	a 1	0	0	a 1	1	1	ab 1
	San Joaquin River Delta							
Antioch	2	2	1	2	1	3	2	
Jersey			d 2					
Webb Pump	ab 4			4	ad 3			
Opposite Central Landing	2	a 2	2	0	a 1	1	b 1	2
Dutch Slough	7	8	8	7	9	8	7	4
Rindge Pump	9	a 7	7	4	a 4	2	4	4
Rock Slough West of Dam	ab 8	9	7	10	7	9	8	7
Rock Slough East of Dam	ab 9	9	19	8	7	5	3	4
Middle River P.O.	7	a 9		6	a 5			ab 3
Mossdale Bridge	5	6	5	2	2	1	4	2

a Low high tide.
 b Taken on following day.
 c Taken two days later.

d Over one hour off scheduled time.
 e Taken on preceding day.
 f Taken two days earlier.

TABLE 83 :

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water
 1938

Station	JANUARY							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1140	940	1200	1380	1260	1180	1280	1140
Point Davis				1020	880	a 360		610
Bullshead Point	a 90		a 160	ab 430	a 148	a 21	ab 340	190
Bay Point							16	17
O and A Ferry	2	a 2	9	8	7	2		3
Innisfail Ferry	30	52	42	66	62	78	72	46
Sacramento River Delta								
Collinsville	2	3		4	a 2		3	d 4
Emmaton	a	2		2	a 2		2	1
Sacramento	a 1	2		1	ab 1	a 1	1	ab 1
San Joaquin River Delta								
Antioch	3	2		2	5	4	3	2
Webb Pump	3	5		3	a 3	abd 4		ab 4
Opposite Central Landing	a	1		2	a 1		1	3
Dutch Slough	0	4		5	4	7	4	5
Rindge Pump	ad 3	ld 4		ab 5	a 5	a 4	4	3
Rock Slough West of Dam	a 5	6		6	a 6	6	6	7
Rock Slough East of Dam	a 3	3		5	a 4	5	4	5
Middle River P.O.				2	a 4			
Mossdale Bridge	2	3		4	2	3	4	4

Station	FEBRUARY							
	2	6	10	14	18	22	26	
San Francisco, San Pablo and Suisun Bays								
Point Orient	1020	520	780	340	340	410	640	
Point Davis		120	136	4	5	31	350	
Bullshead Point	a	7		ab 2	5	a 8	abd 4	
Bay Point				5		ad 5	abd 4	
O and A Ferry	a	4	3	3	a 4		2	
Innisfail Ferry	2	57	25			14	17	25
Sacramento River Delta								
Collinsville	a 2	3				2	2	4
Emmaton	a 1		2	ab 1				2
Sacramento	ade 2	2		1	ab 2	4	1	ab 2
San Joaquin River Delta								
Antioch	3	4		4	2	3	2	3
Webb Pump	ae 3	6	ld	4		4	2	
Opposite Central Landing	a 2	2		2	ab 2	3	3	2
Dutch Slough		4		5	6	4	d 4	3
Rindge Pump	a 2	3		4	ab 2	4		
Rock Slough West of Dam	a 7	13		6	7	10	10	8
Rock Slough East of Dam	a 5	4		6	7	5	5	6
Middle River P. O.				ab 7				
Mossdale Bridge	3	1		1	1	2	2	2

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 83 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours after high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water
 1938

Station	MARCH							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	840				400	410	430	570
Point Davis	240	160	70	230	4	11		
Bullshead Point	ab 4	a 4		ab 3	3	4	ab 3	c 3
Bay Point	4	a 5		4				1
O and A Ferry	2	a 2	ab 3	3	a 2	3	a 1	a 2
Innisfail Ferry		34				11	a 1	a 9
Sacramento River Delta								
Collinsville	4	3	2	1	2	2	2	a 3
Emmaton	ab 1			1	a 2		1	
Sacramento	ab 2	1	1	ab 1	1	1	ab 1	ab 1
San Joaquin River Delta								
Antioch	3	3	4	d 3	a 3	1	3	a 3
Webb Pump			3	2	d 4		ab 4	
Opposite Central Landing	ab 2	1	2	3	1	1	ab 2	a 2
Dutch Slough	10	5	3	3	af 5	4	3	ab 5
Rindge Pump							2	a 3
Rock Slough West of Dam	6	14	13	12	12	15	7	b 10
Rock Slough East of Dam	5	9	5	7	6	5	4	b 5
Mossdale Bridge	3	3	3	2	4	2	2	b 3

Station	APRIL							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	860	800	340	b 690	660	520	a 620	a 670
Point Davis	101	91	246	b 150	130	170	b 120	a 110
Bullshead Point	b 5	a 4	a 8	b 5		12		
Bay Point	a 5	a 3	a 2	a 4		a 3		
O and A Ferry	b 3	a 4	b 2	a 2	a 2	2	a 2	a 1
Innisfail Ferry	a 13	a 14	a 17	a 20	18	a 12	a 19	a 7
Sacramento River Delta								
Collinsville	a 1	a 3	a 3	ad 2	3	a 2	a 1	a 2
Emmaton			a 3		3	a 2		a 1
Sacramento	b 2	1	b 2	b 3	3	a 1	b 1	
San Joaquin River Delta								
Antioch	a 3	a 3	a 3	ab 3	5	a 2	a 1	a 1
Webb Pump	b 2	a 4	a 2			a 2	a 2	a 2
Opposite Central Landing	b 2	a 2	a 3	a 3		a 2	a 1	a 2
Dutch Slough	b 2	a 4	b 3	b 6	3	b 2	b 3	b 3
Rindge Pump	b 3	a 3	a 4	b 4	3	a 2	a 2	a 2
Rock Slough West of Dam	b 7	a 6	a 7	b 5	5	a 5	a 4	a 2
Rock Slough East of Dam	b 5	a 5	a 5	b 5	5	a 3	a 3	a 3
Mossdale Bridge	e 3	b 3	b 2	b 5	4	b 2	b 4	b 3

a, b, c, d, e, f. See footnotes last page of this table.

(TABLE 83. (CONTINUED))

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours after high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water
 1938

Station	MAY															
	2	6	10	14	18	22	26	30								
	San Francisco, San Pablo and Suisun Bays															
Point Orient	1010	680	820	b	820	500	720	900	b	900						
Point Davis		190	b	380	b	210	120		b	260	b	400				
Bullshead Point	2		3		b	27		2	a	2	b	84	a	4		
Bay Point				ab	3	a	2		a	4	a	3	a	1		
O and A Ferry	a	2		2	a	1	b	1	a	2		1	a	1		
Innisfail Ferry	a	8	a	10	a	9	a	8				4	a	5		
	Sacramento River Delta															
Collinsville		3	a	1	bd	3	a	2		1	a	1	a	3		
Emmaton				4			a	4		1	a	2				
Sacramento		1	a	2	b	2	b	3		2	a	2	b	1		
	San Joaquin River Delta															
Antioch				2	a	1	a	3		3	a	3	a	2	a	1
Webb Pump		3	ab	2			b	2		2		2		3	b	1
Opposite Central Landing		1	a	3	a	2	b	4		2	a	2	a	1	b	1
Dutch Slough		2	abd	1	b	2	b	3		1	b	1	ab	2		1
Rindge Pump		2	a	3	a	2	b	3		2	a	2	a	2		1
Rock Slough West of Dam		3	a	3	a	2	b	3		3	a	3	a	2	b	4
Rock Slough East of Dam		3	a	4	a	2	b	1		1	a	2	a	3	b	2
Mossdale Bridge		3	b	2	b	2	b	2		3	b	1	b	2	ab	1

Station	JUNE															
	2	6	10	14	18	22	26	30								
	San Francisco, San Pablo and Suisun Bays															
Point Orient	1060	700	b	660	b	720	500	800	b	1180		1140				
Point Davis	150	220	b	130	b	130	de	280		310	b	440		410		
Bullshead Point		3		95	b	2	b	2	ad	70		237	b	310		240
Bay Point	a	2			a	2								7	a	4
O and A Ferry		1	a	1		1		1		1		2	a	4		3
Innisfail Ferry		6				a	7	6		6	a	6	a	7		
	Sacramento River Delta															
Collinsville		2	a	2	a	2	b	4	a	3	a	3	a	3		5
Emmaton		2	a	2	a	1	b	2		2		5	a	5		
Sacramento		2	a	2	b	2	b	2	a	2		2	b	4		5
	San Joaquin River Delta															
Antioch		2	a	1		a	3			3	b	4	a	4	a	7
Webb Pump		4				b	2			2		2		2		5
Opposite Central Landing		1	a	2	a	2	b	3	a	2		1	a	3		3
Dutch Slough	b	3	ab	1	a	2	a	2		3		1	a	2		2
Rindge Pump		3	a	2						3		1	a	2		2
Rock Slough West of Dam		3	a	1	b	2	b	1	a	2	a	2	b	2		3
Rock Slough East of Dam		2	a	4	b	1	b	3	a	2	a	2	b	3		3
Mossdale Bridge		1	b	3	b	2	b	2	b	1	b	3	b	3		2

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 83 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours after high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water
 1938

Station	JULY							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Point Orient	1120	980	b 1220	b 1100	960	1240	b 1440	1360
Point Davis	580	520	a 560	a 690		940	a 880	
Bullshhead Point	190	380		b 230	150	480	b 720	380
Bay Point			5	a 4	7			210
O and A Ferry	3	a 5	a 2	a 3	3	5	b 42	20
Innisfail Ferry	7	a 9	a 9		8	a 6		39
	Sacramento River Delta							
Collinsville	4	a 5	a 4	a 2	ab 5	a 2	a 4	
Emmaton	2		a 4	b 2			a 4	
Sacramento	a 2	a 3	b 3	b 3	a 4	a 3	b 1	a 3
	San Joaquin River Delta							
Antioch	3	a 4	a 5	d 2	a 4	a 4	a 6	6
Webb Pump	a 3	a 4	a 4	b 2	a 4	b 3	abd 3	
Opposite Central Landing	a 4	a 2	a 1	b 2	a 3	a 4	a 3	a 5
Dutch Slough	a 5	a 3	b 7	b 5	a 2	a 2	ab 5	a 4
Rock Slough West of Dam	a 3	a 4	b 5	b 2	a 1	a 4	b 4	a 3
Rock Slough East of Dam	a 5	a 3	b 5	b 2	a 3	a 4	b 2	a 4
Mossdale Bridge	b 2	b 2	b 2	b 2	b 1	b 1	b 3	b 2

Station	AUGUST							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Point Orient	1400	1400	b 1460	1460	1620	1580	b 1620	1640
Point Davis			b 1180	1220	1080	b 1020	b 1280	
Bullshhead Point	760	b 710	b 740	740	800	b 900		960
Bay Point	290	a 100		55	420	ab 400		420
O and A Ferry	43	b 121	a 50	a 77	140	a 180	b 195	a 122
Innisfail Ferry	48			120		a 161	a 196	200
	Sacramento River Delta							
Collinsville			a 17	a 20	a 25	a 27	a 56	66
Emmaton			a 3	a 6		a 6	b 7	
Sacramento	a 5	b 3	b 3	a 2	a 4	b 5	b 4	a 4
	San Joaquin River Delta							
Antioch	a 5	a 8	a 7	a 21	a 12	a 14	a 21	a 32
Jersey					a 6	a 8	b 9	a 9
Webb Pump		b 5	a 5	a 5	a 5	b 5	b 6	
Opposite Central Landing	a 3	a 4	a 3	a 5	a 9	a 5	b 10	a 6
Dutch Slough	a 4	a 4	b 4	a 4	a 4	a 5	b 3	a 4
Rindge Pump	a 4	a 5	b 2	a 6	a 7	a 11		a 8
Rock Slough West of Dam	a 4	a 5	b 4	a 4	a 4		b 5	a 5
Rock Slough East of Dam	a 4	a 4	b 6	a 3	a 5	a 5	b 6	a 8
Mossdale Bridge	b 2	b 3	b 2	b 1	b 3	b 2	b 11	b 12

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 83 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours after high high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water
 1938

Station	SEPTEMBER							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Point Orient	1620	1500	1550	1640	1580	1580	1700	1480
Point Davis					1260	1300	1320	1180
Bullshead Point	1160		840	860	940	ab 820	760	720
Bay Point	ab 400	340	580	500		580	560	
O and A Ferry	250	a 130	190	a 160		230	ab 240	a 160
Innisfail Ferry	a 200	a 202	250	300			330	310
	Sacramento River Delta							
Collinsville	a 48	ab 49	77	a 73	86	78	74	ab 38
Emmaton		a 5	ab 5				7	
Sacramento	a 3	b 6	ab 4	a 3	a 3	ab 3	a 5	a 3
	San Joaquin River Delta							
Antioch	a 12	a 30	48	a 48	a 42	47	51	a 20
Jersey		a 5		a 6				
Webb Pump		a 6	ab 7	a 7	a 6	ab 6	6	
Opposite Central Landing	a 5	b 5	4	a 5	a 3	5	a 6	a 5
Dutch Slough	a 7	a 11	5	a 6	a 6	8	9	a 6
Rindge Pump	a 15	a 14	b 11	a 11	a 11	12	a 10	a 10
Middle River P.O.						10	a 11	a 13
Rock Slough West of Dam	a 5	a 7	ab 7		a 6	7	a 9	a 7
Rock Slough East of Dam	a 7	a 7	ab 9		a 6	10	a 8	a 11
Mossdale Bridge	b 11	11	10	b 9		11	10	a 12

Station	OCTOBER							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Point Orient		1440	1590	1460	1540	1480	1500	1360
Point Davis	1080	ab 1160		1200	1200	1140	a 1120	
Bullshead Point	a 860	ab 820	a 620	880	a 760	ab 780	820	680
Bay Point			440	400	300	a 420		
O and A Ferry	a 130	ab 150	a 90	144	126	118	a 98	90
Innisfail Ferry	a 300	310	290	a 280	260	270	240	250
	Sacramento River Delta							
Collinsville	a 17	27	28	a 34	10	32	a 19	7
Emmaton			4	a 3		5		3
Sacramento	a 2	2	a 2	a 6	1	a 3	a 2	1
	San Joaquin River Delta							
Antioch	a 23	a 15	22	a 18	16	20	26	16
Jersey		ab 7	6					
Webb Pump		ab 6	a 6	a 6		8	6	
Opposite Central Landing	a 4	3	5	a 3	3	5	a 6	2
Dutch Slough	a 7	7	7	a 7	10	7	a 8	6
Rindge Pump	a 8	8	a 11	a 7	11	9	ad 10	11
Middle River P.O.		ae 8	6	7	5	9	7	8
Rock Slough West of Dam	a 7	7	8	a 8	8	9	a 9	8
Rock Slough East of Dam	a 8	8	8	a 8	7	11	a 8	9
Port Stockton						ab 21	ad 12	
Mossdale Bridge	b 10	10		b 5	7	6	5	7

a, b, c, d, e, f, See footnotes last page of this table.

TABLE 83 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours after high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water
 1938

Station	NOVEMBER							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Point Orient	1480	1560	1560	1520	1560	1500	1480	1300
Point Davis	1040	1060	1120	1040	b 1060		980	1160
Bullshead Point		740	a 560	a 760	ab 620	a 650	690	a 500
Bay Point	332		440		330	308		
O and A Ferry	ab 46	66	70	a 34	ab 44	a 42	a 38	82
Innisfail Ferry	238	224	168	162	152	164	180	182
	Sacramento River Delta							
Collinsville	12	6	a 3	7	6	19	a 6	7
Emmaton			a 3		5	a 4	a 5	
Sacramento	1	ab 1	a 4	2	3	a 3	a 2	3
	San Joaquin River Delta							
Antioch	12				10	14	10	8
Webb Pump				6	8	8	a 6	a 6
Opposite Central Landing	4	4	6	4	3	6	a 3	4
Dutch Slough	9	ab 8	a 7	6	7	8	a 7	11
Rindge Pump	7	7	a 5	8	8	a 9	a 5	9
Middle River P.O.	6	7	7	7	5	6	a 5	7
Rock Slough West of Dam	8	8	a 9	9	d 10	7	a 10	6
Rock Slough East of Dam	9	9	a 8	8	d 7	8	a 7	7
Port Stockton	d 20	ab 24	a 24	25		ad 13		d 15
Mossdale Bridge	6	7	bd 7	7	7	8	b 6	7

Station	DECEMBER							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Point Orient	1420	1440	1580	1480	1540	1300	1300	1240
Point Davis		a 1180	1160			900	960	
Bullshead Point	ab 680	ab 420	340		820	a 340		a 540
Bay Point		132	188		224			240
O and A Ferry	86	ab 9	a 12	25	106	48	a 26	14
Innisfail Ferry	d 194		112	138				124
	Sacramento River Delta							
Collinsville	16	7	a 1	4	13	b 9	3	3
Emmaton	2		a 1		3		2	
Sacramento	3	ab 1	a 2	5	ab 3	a 1	2	2
	San Joaquin River Delta							
Antioch	1	8	5	8	8	6	6	
Webb Pump		5	ad 5	4	4	a 7		
Opposite Central Landing	4	5	a 4	3	3	a 1	2	3
Dutch Slough	7	5	5	7	7	5	5	8
Middle River	5	6	a 5	5	7	5	5	6
Rock Slough West of Dam	7	6	a 6	10	6	a 6	6	7
Rock Slough East of Dam	5	6	a 8	8	6	a 6	6	7
Port Stockton	d 11	ab 8	a 8	d 15	ab 10	d 9		
Mossdale Bridge	7	5	4	6	4	5	5	8

a Low high tide.

b Taken on following day.

c Taken two days later.

d Over one hour off scheduled time.

e Taken on preceding day.

f Taken two days earlier.

TABLE 109

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high tide
Salinity expressed in parts of chlorine per 100,000 parts of water
1939

Station	JANUARY							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1440	1520	1460	1500	1460	1320	1400	1200
Point Davis			920		ab 1020		960	
Bullshead Point	950	a 720	310	ab 410		640	680	ab 410
Bay Point					170	214		
O and A Ferry	224	134	20	52	34			147
Innisfail Ferry	102	254	a 200	150	120	134	a 126	120
Sacramento River Delta								
Collinsville	44	85	4	3	4	4	3	4
Emmaton	2		a 2			4	a 2	
Sacramento	2	ab 2	2	2	ab 2	a 3	2	2
San Joaquin River Delta								
Antioch	20	27	9	8	8	6	a 7	8
Webb Pump	7		a 5	6	7	6	5	
Opposite Central Landing	3	a 5	1	2	4	4	2	
Dutch Slough	9	7	7	ab 5	7	6	6	7
Rindge Pump	7	a 9	6	7	5	5	5	9
Middle River	8	6	7	8	7	6	7	8
Rock Slough West of Dam	7	a 8	8	8	9	a 10	8	9
Rock Slough East of Dam	8	a 8	6	7	9	a 8	8	7
Port Stockton	a 12	a 13	13	7	ab 10		6	
Mossdale Bridge	d 7	6	7	6	4	6	3	6

Station	FEBRUARY							
	2	6	10	14	18	22	26	
San Francisco, San Pablo and Suisun Bays								
Point Orient	1520	1500	1320	1140	1380	1280	1340	
Point Davis	1120		600			880	820	
Bullshead Point	ab 400	610	200	ab 362	ab 500	410	420	
Bay Point				100	142	a 96		
O and A Ferry	74	34	a 8	ab 6	18	a 20	a 9	
Innisfail Ferry	124	120	114	82	60	a 84	85	
Sacramento River Delta								
Collinsville		a 3	4	3				3
Emmaton		a 4		3	ab 3			5
Sacramento	ab 1	a 2	2	2	a 2	2	2	1
San Joaquin River Delta								
Antioch	7	7	8	5	4	5	6	
Webb Pump		4	7	2	5	7	6	
Opposite Central Landing	3	a 2	2	2	5	4	4	
Dutch Slough	9	a 6	8	7	7	8	9	
Rindge Pump	ab 12		6	7	5	9	6	
Middle River	6	7	7	7	5	7	6	
Rock Slough West of Dam	7	9	8	11	7	4	9	
Rock Slough East of Dam	8	6	8	8	8	7	8	
Port Stockton		ad 12		ab 9	a 8			
Mossdale Bridge	2	4	3	4	5		4	

a, b, c, d, e, f, see footnotes last page of this table.

TABLE 109 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water
 1939

Station	MARCH							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1400	1600	1580	1200	1200	1220	1220	1340
Point Davis	900		1120			740	600	
Bullshead Point	ab 400	ab 524	548	ab 210	ab 290	290	480	ab 230
Bay Point	264	196	a 51	162	18	30	ab 52	
O and A Ferry	46	34	a 29	11	7	3	4	6
Innisfail Ferry	70	88	102	102	78	a 82	58	56
Sacramento River Delta								
Collinsville	3	4	4	5	cd 3	a 3	2	3
Emmaton		4		3	a	3	2	
Sacramento	ab 2	1	2	3	ab 3	2	3	2
San Joaquin River Delta								
Antioch	7	9	13	6	4	5	3	2
Webb Pump		6				5	6	4
Opposite Central Landing	5	e 1	5	3	4	4	3	3
Dutch Slough	7	7	d 9	7	8	7	6	10
Rindge Pump	7	6	9	10	14	16	14	15
Middle River	7	6	7	5	8	12	12	12
Rock Slough West of Dam	7	7	7	7	9	11	12	11
Rock Slough East of Dam	5	7	8	9	10	12	10	11
Port Stockton			15					21
Mossdale Bridge	3	3	5	7	5	8	7	4

Station	APRIL							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	b 1480	1330	1280	1200	b 1340	1260	1360	1480
Point Davis			560					
Bullshead Point	a 210	190	a 202	b 146	b 370	340	a 440	b 685
Bay Point	a 14	a 40	a 46	a 53				119
O and A Ferry	b 4	a 9	a 3	a 19	a 9	15	a 44	
Innisfail Ferry	a 42	32	39	a 49	a 41	a 48	56	a 58
Sacramento River Delta								
Collinsville		5	1	a 3	a 2	10	4	a 3
Emmaton		a 2	3	a	3	3		
Sacramento	b 1	1	2	a 1	b 2	2	7	a 4
San Joaquin River Delta								
Antioch	a 4	2	4	a 4	a 5	a 4	5	
Webb Pump	a 6	5	5	b	7	7	5	a 7
Opposite Central Landing	b 2	6	3	a 3	a 2	5	4	a 3
Dutch Slough	a 8	10	8	a 9	a 8	7	7	a 8
Rindge Pump	a 14	13	11	a 12	a 10		10	a 10
Middle River	b 13	13	11	b 12	b 9	9	11	a 11
Rock Slough West of Dam	a 9	10	10	a 10	b 11	10	10	a 11
Rock Slough East of Dam	a 10	13	13	a 12	b 10	10	9	a 10
Port Stockton		13	12	a 17			14	
Mossdale Bridge	b 10	10	9	b	7	7	8	a 7

a, b, c, d, e, f, see foot notes last page of this table.

TABLE 109 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water
 1939

Station	MAY							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	b 1620	: 1480	: 1480	: 1500	b 1700	: 1600	: 1780	: 1620
Point Davis	: 1120	:	: 1040	: 1200	b 1360	: 1260	: 1160	b 1080
Bullshead Point	:	: 800	: 680	a 690	b 830	: 880	: 780	a 790
Bay Point	a 193	a 255	a 234	:	:	a 290	: 300	a 380
O and A Ferry	b 78	:	: 58	a 56	a 92	a 98	: 120	b 128
Innisfail Ferry	a 58	a 83	a 89	a 118	a 122	: 210	a 184	:
Sacramento River Delta								
Collinsville	:	: 5	: 18	a 15	a 18	a 35	a 33	a 39
Emmaton	: 5	:	: :	:	:	:	:	:
Three Mile Slough Bridge	:	:	: 4	:	a 5	: 4	:	a 4
Rio Vista	:	:	:	:	:	:	b 4	b 6
Sacramento	: 2	: 4	a 3	a 3	: 5	: 7	a 3	b 2
San Joaquin River Delta								
Antioch	a 10	a 16	a 14	a 13	a 20	: 50	a 18	: 19
Jersey	:	:	:	:	:	9	: 7	:
Webb Pump	:	: 7	:	a 6	:	6	a 6	a 7
Opposite Central Landing	b 4	: 5	a 4	a 5	b 6	: 6	a 6	: 7
Dutch Slough	b 17	: 7	a 7	a 8	a 9	: 9	a 7	: 6
Rindge Pump	a 10	: 11	a 10	a 10	a 9	: 9	a 10	: 11
Middle River	a 5	: 7	a 8	a 9	a 7	: 8	a 9	: 9
Rock Slough West of Dam	b 9	: 10	a 9	a 9	b 10	: 8	a 8	: 8
Rock Slough East of Dam	b 13	: 10	a 10	a 8	b 9	: 8	a 7	: 6
Port Stockton	:	: 14	:	:	:	: 18	:	:
Mossdale Bridge	b 7	: 8	: 8	b 7	b 8	: 7	b 9	b 8

Station	JUNE							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	b 1600	: 1640	: 1600	: 1680	b 1700	: 1700	: 1760	:
Point Davis	b 1260	: 1160	: 1400	: 1400	b 1380	: 1460	: 1340	a 1400
Bullshead Point	b 960	: 820	: 1020	b 1100	b 1060	: 1080	:	:
Bay Point	: 420	: 500	a 490	a 560	:	a 770	: 768	a 810
O and A Ferry	a 124	a 274	a 350	a 300	a 345	a 405	a 440	a 500
Innisfail Ferry	a 230	a 230	a 255	a 275	a 380	a 430	a 450	a 550
Sacramento River Delta								
Collinsville	db 65	: 63	a 75	a 125	b 255	a 268	a 272	:
Emmaton	a 5	:	d 7	:	a 24	:	a 56	:
Three Mile Slough Bridge	b 6	a 5	b 5	b 14	b 23	: 28	: 74	:
Rio Vista Bridge	: 4	: 3	b 5	b 4	b 4	: 6	: 12	: 17
Sacramento	b 4	: 4	a 5	a 2	b 4	a 3	a 2	a 4
San Joaquin River Delta								
Antioch	: 29	: 40	a 32	a 73	a 106	: 183	a 154	a 216
Jersey	a 10	: 9	a 10	a 10	:	:	:	:
Webb Pump	b 7	: 7	a 7	d 7	b 8	a 10	a 12	a 18
Opposite Central Landing	b 6	: 5	a 7	a 7	b 7	a 8	a 7	a 10
Dutch Slough	b 7	: 8	a 8	a 11	b 9	a 14	a 12	a 19
Rock Slough West of Dam	b 8	: 7	a 8	a 8	b 9	a 9	a 8	a 8
Rock Slough East of Dam	b 8	: 9	a 9	a 8	b 8	a 9	a 7	a 8
Rindge Pump	: 11	: 9	a 11	a 14	a 10	a 12	a 14	a 15
Middle River	a 8	: 8	a 8	a 10	a 8	a 9	a 9	a 10
Port Stockton	:	: 20	a 19	:	:	:	:	:
Mossdale Bridge	b 7	: 8	b 9	b 10	b 7	b 9	: 8	: 9

a, b, c, d, e, f, see foot notes last page of this table.

TABLE 109 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high tide
Salinity expressed in parts of chlorine per 100,000 parts of water

Station	JULY									
	2	6	10	14	18	22	26	30		
San Francisco, San Pablo and Suisun Bays										
Point Orient	b 1780	: 1760	: 1800	: 1740	b 1800	: 1760	: 1840	b 1860		
Point Davis	a 1460	: 1440	: 1500	: 1560	b 1660	: 1620	: 1660	b 1720		
Bullhead Point	a 1200	: 1120	: 1140	b 1380	b 1380	: 1440	: 1400	b 1440		
Bay Point	a 790	a 890	a 940	a 880	a 960		a 1160	a 1180		
O and A Ferry	a 560	: 580	: 658	b 790	a 760		a 810	b 980		
Innisfail Ferry	A 590	a 640	a 610	a 700	a 810	a 790	a 880	a 1000		
Sacramento River Delta										
Collinsville	a 330	a 430	d 460	a 520	a 590	a 640	a 760			
Emmaton	d 133							a 410		
Three Mile Slough Bridge	b 129	a 110	: 140	b 209	b 234	: 305	b 380	b 440		
Rio Vista Bridge	b 21	: 25	: 50	b 76	: 101	: 154	b 200	b 245		
Ryer Island Ferry					36	86	114	127		
Liberty Ferry			7	7	11	28	55	65		
Grand Island (Steamboat Slough)			b 7	b 20	b 36	a 47	a 74	b 109		
Isleton Bridge				b 23	b 33	65	69	b 106		
Ryde			b 5		b 6	7	a 7	b 22		
Howard Ferry					b 19	a 18	26	b 75		
Reclamation Dist. 2068							a 7	a 4		
Sacramento	b 4	a 4	a 5		b 5	a 7	b 6	b 7		
San Joaquin River Delta										
Antioch		a 325	a 320	a 370	570	a 470	a 520	a 620		
Jersey		a 112	d 70	d 92	b 300					
Webb Pump	ab 21		a 20	a 43	b 116	a 81	a 111	ad 139		
Opposite Central Landing	b 12	a 14	a 13	a 16	b 31	a 31	a 45	b 86		
Dutch Slough	28	a 27	a 28	a 37	b 79	a 77	a 109	b 162		
Rock Slough West of Dam	11	a 11	a 10	a 14	b 19	a 23	a 29	b 44		
Camp 2, Medford Island								b 49		
Mandeville Pump					a 18	a 17	a 25	a 23		
King Island Pump					15	a 13	a 18	b 25		
Rock Slough East of Dam	10	a 10	a 10	a 11	b 20	a 19	a 23	b 23		
Ridge Pump	a 15	a 15	a 16	a 15	a 20	a 18	a 18	a 19		
Orwood Bridge					d 9	a 14	b 16	b 16		
Middle River	b 9	a 9	a 9	a 12	a 13	a 13	a 14	a 18		
Victoria Island			c 9	d 13	d 13	d 11	b 14	b 16		
Port Stockton		a 28						b 29		
Mossdale Bridge	b 9	11	b 13	b 9	b 12	b 13	b 11	b 12		
Mokelumne River Delta										
Southwest Point			a 10	b 21	a 15	a 19	b 49			
Tyler Island Ferry			6	b 6	b 7	b 7	b 10	b 12		
Camp 11, Staten Island			a 5	b 7	a 5	a 8	b 11			
Camp 29, Staten Island			a 7	b 9	a 9	a 12	b 18			
Camp 25, Staten Island			a 10	10	a 11	a 12	b 14			
Camp 20, Staten Island					a 14	b 15				

a, b, c, d, e, f, see footnotes last page of this table.

Salinity expressed in parts of chlorine per 100,000 parts of water

TABLE 109 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water
 1939

Station	AUGUST									
	2	6	10	14	18	22	26	30		
San Francisco, San Pablo and Suisun Bays										
Point Orient	1800	1800	1840	1920	1860	1860	1840	1820		
Point Davis	1640	a 1660	1620	a 1780	1700	1740		b 1740		
Bullshead Point		1420	1520	b 1640	1420	1520	1560	a 1450		
Bay Point	a 1200	a 1180	a 1320	a 1280	a 1300		a 1360	a 1360		
O and A Ferry	a 1000	a 980	a 980	a 1040	1240	a 1100	a 1060	a 1080		
Innisfail Ferry	a 980	1000	a 980	a 1140	1180	1120	a 1360	a 1180		
Sacramento River Delta										
Collinsville	a 820	a 840	830	a 860	1040	a 930	a 910	a 850		
Emmaton	500	a 460		a 530	580		a 550	b 540		
Three Mile Slough Bridge	440	460	ab 550	ab 525	540	590	b 590	510		
Rio Vista Bridge	270	275	b 320	b 375	405	405	b 360	a 325		
Ryer Island Ferry	143	169		293	310	360	375			
Liberty Ferry	62	82	117	143	190	241	231			
Grand Island (Steamboat Slough)	117	144	a 126	b 218	270	a 200	a 195	b 175		
Isleton Bridge	114	140	b 160	b 240	260	250	b 210	74		
Reclamation Dist. 2068	5	a 6	a 3	a 8	11	a 26	a 37	a 37		
Howard Ferry	77	98	a 98	b 146	158	a 98	a 78	43		
Little Holland Ferry		d 34	e 10	a 26	38	a 15	a 11	b 7		
Ryde	18	26	a 18	b 38	30	a 13	a 10	b 8		
Walnut Grove			ab 13	ab 18	17	a 11	12	b 8		
Lisbon		a 5	a 7	a 6	8	ad 8				
Sacramento	6	a 7	b 7	b 6	a 6	a 6	b 5	b 4		
San Joaquin River Delta										
Antioch	a 640	a 650	a 610	a 730	920	830	a 740	a 760		
Jersey	150			a 412	a 500		a 440			
Webb Pump	162	ad 142	a 157	a 160	a 200	a 215	a 265	a 260		
Opposite Central Landing	77	a 76	a 92	a 136	a 132	a 124	a 198	b 136		
Dutch Slough	170	a 130	a 148	e 202	a 210	a 215	a 200	b 205		
Rock Slough West Dam	44	a 52	a 48	b 59	a 58	a 66	a 74	ab 88		
Camp 2, Medford Island	54		b 76	b 91	102	a 103				
Mandeville Pump	31	a 38	45	55		a 76	a 80	89		
King Island Pump	22	20		b 41	a 51	a 50	a 57	b 71		
Rock Slough East of Dam	24	a 34	a 36	b 35	a 38	a 54	a 56	b 57		
Rindge Pump	21	a 22	a 32	a 28	a 35	a 42	a 38	a 46		
Orwood Bridge	e 21	19	b 24	b 29	37	b 38	ab 45	d 32		
East Contra Costa I.D.				a 19	a 20	a 26	a 26	a 29		
Middle River P.O.	16	a 22	a 24	a 30	39	a 44	a 45	a 51		
Victoria Island	15	17	b 19	b 21	27	b 28	b 30	32		
Clifton Court Ferry			a 12	a 14	a 14	a 15	a 15	a 15		
Port Stockton					a 21			b 32		
Naglee Burke						db 12	a 10	a 13		
Mossdale Bridge	d 9	b 9	b 11	b 11	b 14	b 12	b 13	b 16		
Mokelumne River Delta										
Southwest Point	49	a 30	a 30	b 86	a 74	a 42	35	41		
Tyler Island Ferry	9	ab 9	b 9	b 16	13	b 11	b 10	b 7		
Camp 11, Staten Island	8	a 8	a 6	b 12	a 13	a 12	a 11	b 12		
Camp 29, Staten Island	17	a 19	a 18	b 25	a 28	a 32	a 32	b 28		
Camp 25, Staten Island	13	a 15	a 15	20	a 20	a 24	a 23	b 30		
Camp 20, Staten Island	14	a 11	a 13	17	a 19	a 16	a 21	b 22		

a, b, c, d, e, f, see footnotes last page of this table.

TABLE 109 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water
 1939

Station	SEPTEMBER									
	2	6	10	14	18	22	26	30		
San Francisco, San Pablo and Suisun Bays										
Point Orient	1860	1860	1840	1860	1780	1800	1840	1780		
Point Davis	1740	1760	1780	abl700	1700		1700			
Bullshead Point	1410		a 1440	abl580	1440	1440		1400		
Bay Point	1440	1380	1380	1380	1140	a 1200	1260	1100		
O and A Ferry	a 1060	a 1040	b 1060	abl180	a 850	a 860	880	a 800		
Innisfail Ferry			a 1220	a 1240		a 1220	1180	1140		
Sacramento River Delta										
Collinsville	900	a 880	a 835	860	a 670	a 500	640	660		
Exmaton	a 510	a 400	a 510	340	a 380		300	a 295		
Three Mile Slough Bridge	420	380	b 530	300		b 280	325	295		
Rio Vista Bridge	230	245	b 340	a 215	adb235	b 190	191	155		
Ryer Island Ferry	264	206		121	223	232	106	72		
Liberty Ferry	195	149	126	102	143	135	130	62		
Grand Island (Steamboat Slough)	a 60	a 13	a 168	92	a 16	a 77	38	37		
Isleton Bridge	127		b 128	40	108	b 16	4	7		
Reclamation Dist. 2068	a 33	a 69	a 76	77	a 77			82		
Howard Ferry	a 20	ad 7	a 5	7	a 6	a 5	3	5		
Little Holland Ferry	a 7									
Ryde	a 8	a 7	a 5	5	a 6	a 5	4	5		
Walnut Grove			b 5	7		b 3	4	7		
Sacramento	a 7	a 6	ab 4	ab 5	b 4	a 2	ab 4	5		
San Joaquin River Delta										
Antioch	800	830	a 740	700	610	a 570	530			
Webb Pump		a 220	a 205	ab 185		a 148	158	a 152		
Opposite Central Landing	138	a 100	a 100	104	a 66	a 90	62	a 44		
Dutch Slough	a 205	a 180	b 225	125	a 184	a 185	182	188		
Rock Slough West of Dam	a 77	a 84	a 91	ab 92	a 94	a 88	84	81		
Camp 2, Medford Island	115	a 121	ad 112	b 112	a 103					
Mandeville Pump	a 91	a 94	a 104	100	a 103	a 94	96	a 84		
King Island Pump	a 65	b 58		79	a 55	a 52		63		
Rock Slough East of Dam	a 55	a 60	a 66	ab 68	a 70	a 71	68	d 65		
Rindge Pump	a 37	a 44	a 52	55	a 40	a 60	48	47		
Orwood Bridge	b 46	ab 38	b 54	46	38	b 46	38	33		
East Contra Costa I.D.	a 25	a 30	a 31	a 30	a 32	a 29	25	24		
Middle River P.O.	54	a 53	a 50	60	a 57	a 48	55	a 44		
Victoria Island	32	b 33	b 35	29	38	b 25	19	15		
Clifton Court Ferry	a 11	b 12	a 12		19	a 10	ab 11			
Port Stockton	a 26	a 22								
Naglee Burke	a 11	b 12	b 14	11	a 14	b 12	a 10	a 10		
Mossdale Bridge	b 10	b 14	b 9	10	b 11	ab 7	9	10		
Mokelumne River Delta										
Southwest Point	a 28	a 20	a 26	b 25	a 17	a 12	11	ad 7		
Tyler Island Ferry	7	7	b 6	6	6	b 5	5			
Camp 11, Staten Island	a 9	a 6	a 7	ab 6	a 5	a 5	3	a 2		
Camp 29, Staten Island	a 25	a 23	a 18	ab 15	a 17	a 12	17	a 13		
Camp 25, Staten Island	a 31	a 27	a 30	ab 23	a 20	a 15	12	a 6		
Camp 20, Staten Island	a 16	a 18	a 16	ab 16	a 5	a 3	2	a 2		

a, b, c, d, e, f, see footnotes last page of this table.

TABLE 109 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high tide
Salinity expressed in parts of chlorine per 100,000 parts of water

Station	OCTOBER							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1840	1800	1840	1780	1780	1740	1780	1800
Point Davis	1700	1640	1580	1840	1520	1460	1500	1500
Bullshead Point	1340		a 1280	1080	1280	1060	abl 460	a 1140
Bay Point	1080		1020	a 800		660		
O and A Ferry	a 700	780	600	a 600	a 560	ab 620	ab 450	a 480
Innisfail Ferry	1100	a 1020	960		820	860	840	790
Sacramento River Delta								
Collinsville	580	a 510	330	a 430	a 365	305	375	a 295
Emmaton		a 165	146	b 178		90		a 92
Three Mile Slough Bridge	235	195	130	160		92	ab 92	a 97
Rio Vista Bridge	100	72	66	64	35	44	18	25
Ryer Island Ferry	42	22	29	22	10	8		8
Liberty Ferry	48	24	23	20	16	12	12	12
Grand Island (Steamboat Slough)		a 14	13		a 6		6	4
Isleton Bridge	4	2	5	7	3	2	3	3
Reclamation Dist. 2068	a 78	a 77	a 79					
Howard Ferry		a 3	3		a 3		7	3
Ryde		a 5	4		a 4		3	3
Walnut Grove	3	4		4	2	5	3	6
Sacramento	a 4	a 2	a 3	a 2	a 2	3	ab 2	4
San Joaquin River Delta								
Antioch	470	a 410	380	385	285	a 230	280	300
Jersey	a 204							
Webb Pump	a 146					68	65	60
Opposite Central Landing	76	52	53	a 50	a 25	40	29	a 22
Dutch Slough	a 174	a 160	126	122	a 95	90	83	76
Rock Slough West of Dam	a 72	a 67	58	a 45	a 40	40	32	a 32
Mandeville Pump		a 72	61	a 52	a 45	45	44	39
King Island Pump	a 68	a 59	54	51	a 48		43	
Rock Slough East of Dam	a 57	a 43	40	a 28	a 29	24	24	a 22
Rindge Pump	41	a 62	25	26	a 23	20	22	
Orwood Bridge	30	17	14		12	12	d 11	15
East Contra Costa I., D.		a 24	21	a 17	a 13		13	a 15
Middle River P.O.	a 44	a 30	19	a 23	a 18	17	18	15
Victoria Island	15	b 10	8	8	9	11	9	11
Clifton Court Ferry	11	a 6	a 7	a 9	a 8	ab 8	a 8	10
Port Stockton	a 23							
Naglee Burke	10	a 7	7	a 9	a 8			
Mossdale Bridge	b 11	b 9	10	9	b 13	12	9	9
Mokelumne River Delta								
Southwest Point	a 6	a 10	3	a 9	a 3	6	4	
Camp 11, Staten Island	a 6	a 2	2	a 2	a 2	2	2	
Camp 29, Staten Island	a 8	a 8	10	a 5	a 6	7	7	
Camp 25, Staten Island	a 7	a 9	5	a 7	a 7	6	6	
Camp 20, Staten Island	a 3	a 3	3	a 2	a 2	4	2	

a, b, c, d, e, f, see footnotes last page of this table.

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	NOVEMBER								
	2	6	10	14	18	22	26	30	
San Francisco, San Pablo and Suisun Bays									
Point Orient	1780	1780	1720	1720	1720	1740	1760	1620	
Point Davis	1700	1480	1480	1480	1360	1580	1480	1480	
Bullshead Point	1280	a 1340	ab 1000	1140		ab 1120	1200	1180	
Bay Point	640	880	920	680	620		850	780	
O and A Ferry	480	520	ab 480	a 460	440	470	580	530	
Innisfail Ferry	a 780	720	720	690	590	670	710	710	
Sacramento River Delta									
Collinsville	325	285	340	a 265	245	280		295	
Emmaton	98		82		54		55		
Three Mile Slough Bridge	73	59	b 64	55	50	44		35	
Rio Vista Bridge	16	10	10	12	a 6	5	4	5	
Sacramento	a 2	7	ab 3	a 2	2	5	ab 4	2	
San Joaquin River Delta									
Antioch	a 240	235	270	255		230	280		
Webb Pump		53	ab 44		a 36		ab 30	31	
Opposite Central Landing	a 20	27	ab 10	a 7	19	18	ab 15	a 7	
Dutch Slough	a 62	a 63	54	a 48	41	40	39	35	
Rock Slough West of Dam	a 24	24	22	a 20	17	18	19	a 16	
Mandeville Pump	a 39		32	a 27	25		26	a 22	
Rock Slough East of Dam	a 24	21	17	a 15	15	17	15	a 14	
Orwood Bridge	14	13	15	10	10	b 17	9	12	
East Contra Costa I.D.			20						
Middle River P.O.	a 18	15	15	15	12	11	12	12	
Victoria Island	9	11	11	9	10	9	7	10	
Port Stockton							b 18		
Mossdale Bridge	11	14	10	10	10	10	9	9	

Station	DECEMBER								
	2	6	10	14	18	22	26	30	
San Francisco, San Pablo and Suisun Bays									
Point Orient	1780	1760	1760	1750	1620	1680	1720	1580	
Point Davis	b 1280	1460	1520		1220	1300	b 1280	1260	
Bullshead Point	a 1120		1360	980	a 660		ab 680	860	
Bay Point			820	430			510		
O and A Ferry	410	600	ab 220	162	158	ab 204	137	a 270	
Innisfail Ferry	730	650		a 670	410	460		a 440	
Sacramento River Delta									
Collinsville	240	288	d 299	a 120	a 54	91	142	a 82	
Emmaton	a 36		38	8			8		
Three Mile Slough Bridge	a 38	40	ab 64	7	a 4	6	6	6	
Rio Vista Bridge	a 3	2	20	4	2	2	3	2	
Reclamation Dist. 2068			33						
Sacramento	2	1	5	a 2	3	2	1	3	
San Joaquin River Delta									
Antioch		235	345	115	46	50	69	44	
Webb Pump	26		ab 27			17	17	17	
Opposite Central Landing	14	12	15	a 4	ab 10	8	ab 6	8	
Dutch Slough	32	37	33	28	28	23	20	20	
Rock Slough West of Dam	16	16	15	a 17	17	17	16	14	
Mandeville	23		18	a 17	17	15	16	a 14	
Rock Slough East of Dam	15	13	15	a 17	15	14	13	16	
Ridge Pump	15		18	a 18		16	15	19	
Orwood Bridge		10	12	13	14	10			
Middle River P.O.	13	15	14	14	11	12	12	13	
Victoria Island	9	12	a 11		10	a 10	10	9	
Port Stockton								12	
Mossdale Bridge	8	8	a 8	10	10	10	9	b 11	

a Low high tide.
 b Taken on following day.
 c Taken two days later.

d Over one hour off scheduled time.
 e Taken on preceding day.
 f Taken two days earlier.

TABLE 118.

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water

Station	JANUARY							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1660	1600	1240	780	1060	1480	1400	1420
Point Davis		800	400	180	740	950	780	
Bullshead Point	a 700		a 54	100	a 65	ab 220	450	a 45
Bay Point				43		120	6	7
O and A Ferry	a 155	ab 7	a 4	a 4	ab 6	25	30	a 5
Innisfail Ferry	430	215	112	a 134	112	48	54	65
Sacramento River Delta								
Collinsville	93	ab 6	2	4		4	11	8
Emmaton	7	6		a 5		7	4	
Three Mile Slough	6	4	5	ad 3	4	3	7	6
Rio Vista	4	3	1	3	3	2	3	a 7
Sacramento	4	4	a 2	3	3	3	a 6	7
San Joaquin River Delta								
Antioch	39	12	10	9	7	7	9	a 7
Webb Pump			a 12			ab 8		17
Opposite Central Landing	7	6	a 4	5	2	4	a 3	4
Dutch Slough	17	16	19	16	16	13	a 12	10
Rook Slough West of Dam	15	13	7	16	16	13	12	12
Rook Slough East of Dam	13	11	10	d 16	13	10	13	11
Rindge Pump	12	8	11	6	5	5	7	12
Middle River	12	11	13	13	10	9	10	8
Port Stockton	9		a 9		8		a 10	
Mossdale Bridge	10	9	8	8	6	5	7	8

Station	FEBRUARY							
	2	6	10	14	18	22	26	
San Francisco, San Pablo and Suisun Bays								
Point Orient	1180	960	860	850	920	1210	114	
Point Davis	410	218	235	280	265	ab 460	485	
Bullshead Point	ab 40	ab 24		223	32	ab 30	17	
Bay Point		7	8	7		8	a 7	
O and A Ferry	ab 6	6	6	a 5	4	6	3	
Innisfail Ferry	66	73	72	58	48	34	35	
Sacramento River Delta								
Collinsville	5	5	4	6	4	3		
Emmaton		3	a 3		4		3	
Three Mile Slough Bridge	3	ab 2	2	2	10	4	3	3
Rio Vista Bridge	5	4	2	2	2	2	2	3
Sacramento	2	2	a 3	1	4	3	3	
San Joaquin River Delta								
Antioch	7	7	6	6	6	6	6	3
Webb Pump		ab 9		11		ab 7	5	
Opposite Central Landing	4	3	2	3	4	3	3	
Dutch Slough	10	9	14	7	7	7	7	
Rook Slough West of Dam	13	11	a 9	9	8	11	10	
Rook Slough East of Dam	8	9	a 7	8	13	8	8	
Rindge Pump			a 4	5	3	9	7	
Middle River		6	6	5	8	5	5	
Port Stockton				8				
Mossdale Bridge	6	6	8	10	8	7	8	

a, b, c, d, e, f, see footnotes last page of this table.

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water
 1940

Station	MARCH							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	570	640	580	890	1060	1130	1100	780
Point Davis		14	59	177	410		600	140
Bullshead Point	ab 12	ab 8	7	33	ab 220	60	265	25
Bay Point	6	5	a 4		11	11		
O and A Ferry	3	4	a 4	a 4	b 6	5	a 3	a 3
Innisfail Ferry	15	14	20	23	31	32	a 47	48
Sacramento River Delta								
Collinsville	3	5	6	2		2	a 9	3
Emmaton	1		a 3	5			2	
Three Mile Slough Bridge	2	2	4	3	3	6	a 2	2
Rio Vista Bridge	2	3	2	3	2	4	2	2
Sacramento	2	3	3	3	2	1	a 1	2
San Joaquin River Delta								
Antioch	3	4	2		4	6	a 4	2
Webb Pump		3			5	db 5	3	
Opposite Central Landing	3	4	3	2		3	2	
Dutch Slough	6	6	5	5	5	4	a 2	2
Rock Slough West of Dam	11	15	11	9	7	8	7	5
Rock Slough East of Dam	13	12	10	9	7	5	7	7
Rindge Pump	4	6	4	4	6	6	5	3
Middle River	4	6	5	4	5	5	6	3
Port Stockton	8				3	5	8	
Mossdale Bridge	2	3	5	4	3	5	5	3

Station	April							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	460	520	560	600	1160	b 1100	940	1000
Point Davis	b 22	b 33		213	b 560	b 430	230	360
Bullshead Point	b 16	b 18		11	b 154	a 24	23	208
Bay Point		a 11	10	8	a 24	a 7		
O and A Ferry	b 3	b 11	a 10	a 10	a 6	a 5	a 2	b 4
Innisfail Ferry	a 16	a 11	a 17	a 22	a 21	a 24	23	a 32
Sacramento River Delta								
Collinsville	a 2	a 5	5	4	a 5	a 3	3	a 4
Emmaton	a 2		2		a 3		2	
Three Mile Slough Bridge	b 2	b 3	4	3				
Rio Vista Bridge	tb 2	tb 5	3	3				
Sacramento	tb 2	tb 3	4	3	a 4	3	5	1
San Joaquin River Delta								
Antioch	a 6	a 4	5	a 7	a 4	a 5	6	a 7
Webb Pump			a 7			2	4	
Opposite Central Landing	a 2	tb 3	a 6	5	a 7	3	2	a 5
Dutch Slough	a 4	tb 4	5	4	a 5	4	5	a 4
Rock Slough West of Dam	a 10		6	7	a 6	7	5	a 6
Rock Slough East of Dam	a 6		7	6	a 5	5	4	a 3
Rindge Pump	a 2	a 7	4	6	a 5	5	4	a 4
Middle River	a 4	a 8	4	5	a 5	5	4	a 4
Mossdale Bridge	b 4	tb 6	8	4	4	5	3	a 4

a, b, c, d, e, f, see footnotes last page of this table.

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide
Salinity expressed in parts of chloride per 100,000 parts of water
1940

Station	MAY							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1040	b 1100	: 1160	: 960	: 1160	b 1380	: 1240	: 1140
Point Davis	b 520	: 420	: 500	: 460	:	b 630	: 380	: 560
Bullhead Point	b 350	b 240	: 230	: 220	b 59	a 80	: 100	: 285
Bay Point	a 14	a 3	a 4	:	a 6	a 6	:	:
O and A Ferry	b 2	:	a 3	:	ab 5	a 4	a 3	a 5
Innisfail Ferry	a 32	a 30	a 28	a 31	a 31	a 23	: 24	:
Sacramento River Delta								
Collinsville	a 3	a 2	: 4	a 4	:	a 5	: 2	a 2
Emmaton	:	a 2	: 5	:	:	a 3	: 4	:
Sacramento	b 3	b 2	: 2	a 3	b 3	b 2	d 2	a 2
San Joaquin River Delta								
Antioch	a 3	a 3	a 5	a 3	a 4	a 3	: 3	a 3
Webb Pump	:	b 4	:	a 3	:	b 2	:	:
Opposite Central Landing	a 2	a 3	: 3	a 4	b 2	b 3	: 2	a 2
Dutch Slough	a 5	:	:	a 3	a 3	b 2	: 4	a 5
Rock Slough West of Dam	a 7	a 5	: 5	a 8	a 5	b 5	: 7	a 4
Rock Slough East of Dam	a 5	a 5	: 4	a 3	a 3	b 4	: 4	a 4
Rindge Pump	a 3	a 3	: 2	a 4	a 2	a 4	: 3	a 2
Middle River	a 3	a 3	: 3	a 2	a 2	a 3	: 2	a 2
Mossdale Bridge	b 7	:	: 2	b 2	b 2	b 2	: 4	: 3

Station	JUNE							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1160	b 1300	: 1220	: 1340	b 1500	: 1440	: 1460	: 1440
Point Davis	b 630	a 570	:	:	b 810	: 870	: 800	:
Bullhead Point	a 135	b 325	: 190	a 435	b 585	a 43	: 45	a 350
Bay Point	:	a 7	a 27	:	a 62	:	:	:
O and A Ferry	b 4	a 3	a 6	a 11	a 8	a 11	a 12	a 42
Innisfail Ferry	a 26	b 17	: 17	a 22	a 22	a 30	: 28	a 42
Sacramento River Delta								
Collinsville	a 3	a 4	: 3	a 8	a 4	a 6	a 5	a 5
Emmaton	a 3	b 3	:	:	a 2	:	a 3	:
Sacramento	b 3	b 2	: 2	a 3	a 2	: 2	a 2	a 2
San Joaquin River Delta								
Antioch	a 3	a 3	: 4	a 4	a 1	: 2	a 4	a 2
Webb Pump	:	:	:	:	a 4	:	a 2	ad 3
Opposite Central Landing	a 3	b 2	: 3	a 4	a 2	a 2	a 3	a 3
Dutch Slough	a 2	b 3	: 5	a 5	b 3	: 3	a 1	a 2
Rock Slough West of Dam	a 6	b 6	: 8	a 9	a 3	:	a 7	a 4
Rock Slough East of Dam	a 3	b 3	: 4	a 2	a 2	: 3	a 2	a 2
Rindge Pump	a 3	a 4	: 4	a 2	a 2	: 4	a 5	a 5
Middle River	:	a 2	: 3	a 4	a 2	: 2	a 2	a 1
Port Stockton	:	:	:	a 7	:	: 6	: 4	:
Mossdale Bridge	b 2	b 3	: 5	b 3	ab 2	: 4	:	:

a, b, c, d, e, f, see footnotes last page of this table.

TABLE 118 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high tide
 Salinity expressed in parts of chloride per 100,000 parts of water
 1940

Station	JULY							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1540	b 1600	1400	1620	b 1640	1580		1680
Point Davis	1140	b 1140		1500	b 1260	1240	1280	1340
Bullshead Point		a 460	760	a 600	b 930	900		
Bay Point				a 66	b 110			
O and A Ferry	104	a 91	a 115	d 244	a 205	295	a 275	a 385
Innisfail Ferry	a 44		163	a 161	325	310	385	a 355
Sacramento River Delta								
Collinsville	a 10		a 51	a 72	b 144	165	a 180	a 200
Emmaton		b 6	a 7		a 11	14	a 20	
Sacramento		a 3	a 5	a 3	b 3	5	a 6	a 5
San Joaquin River Delta								
Antioch	a d 9	a 14	22	a 33	a 80	107	a 84	a 106
Webb Pump		b 4	a 5	a 12		6	a 10	
Opposite Central Landing		a 5	a 5	a 7	b 4	4	a 10	a 10
Dutch Slough	b 5	b 5	a 5	a 8	a 5	6	a 6	a 8
Rock Slough West of Dam	a 6	b 5	a 7	a 5	b 7	5	a 7	a 7
Rock Slough East of Dam	a 4	b 2	a 3	a 9	b 5	4	a 8	a 6
Rindge Pump		a 7	a 7	a 7		10	a 12	a 21
Middle River	a 3	a 4	a 5	a 5	a 8	5	a 8	a 8
Mossdale Bridge	b 6	b 7	b 7	b 9	b 8	6	b 8	10

Station	AUGUST							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	b 1700	1720	1700	1700	b 1740	1760		1740
Point Davis	b 1360	1360	1480		b 1480	1540		
Bay Point	540	a 730	a 710	a 890	a 899	980	a 860	a 880
O and A Ferry	a 365	a 500	a 500	a 610	570	640	720	b 670
Innisfail	a 405	a 530	600	a 610	a 640	a 650	a 690	a 720
Sacramento River Delta								
Collinsville	a 250	380	435	a 345		a 440	a 420	a 400
Emmaton		72	a 110		b 94		a 130	
Sacramento	b 5	5		b 3	b 3	a 2	a 4	b 2
San Joaquin River Delta								
Antioch	a 125	a 245	a 185	a 260	265	a 270	a 280	a 300
Webb		19		a 23	b 27			
Opposite Central Landing	a 10	a 9	a 9	a 12	b 14	a 8	a 12	a 8
Dutch Slough	a 11	a 16	a 16	a d 23	b 36	a 28	a 28	a 32
Rock Slough West of Dam	a 6	6	a 10		b 8	a 11	a 6	a 10
Rock Slough East of Dam	a 6	a 9	a 10	a 7	b 8	a 8	a 10	a 9
Rindge Pump	a 13	a 9	a 14	a 18	11	a 12	a 9	a 16
Middle River	a 7	a 10	a 12	a 9	a 9	7	a 17	a 15
Mossdale	b 9	9	b 9	b 8	b 10	b 6	b 12	b 12
Port Stockton								db 20

a, b, c, d, e, f, see footnotes last page of this table.

TABLE 118 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide
 Salinity expressed in parts of chloride per 100,000 parts of water
 1940

Station	SEPTEMBER							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	b 1820	: 1840	: 1780	b 1640	: 1720	: 1700	:	:
Point Davis	:	: 1760	: 1500	:	: 1460	: 1420	: 1460	: 1460
Bullshhead Point	b 1055	: 1300	: 1020	b 1060	: 1000	: 1340	: 1040	:
Bay Point	a 990	: 900	: 800	:	:	a 740	:	:
O and A Ferry	a 650	a 660	a 610	:	a 590	: 500	: 420	: 660
Innisfail Ferry	a 430	: 790	a 770	a 750	a 730	:	:	: 590
Sacramento River Delta								
Collinsville	b 450	a 350	a 420	a 370	a 380	:	a 235	: 215
Emmaton	a 140	a 95	a 100	:	: 50	:	a 18	:
Sacramento	b 3	a 6	a 3	b 4	a 2	a 3	a 3	: 3
San Joaquin River Delta								
Antioch	a 380	: 440	a 280	a 290	: 290	a 170	a 190	: 175
Webb Pump	:	a 25	a d 23	:	a 24	: 23	:	:
Opposite Central Landings	b 13	a 12	: 10	b 9	a 13	a 7	a 15	: 9
Dutch Slough	b 42	a 34	a 34	a 40	: 37	a 31	a 26	: 23
Rock Slough West of Dam	a 7	a 10	a 11	a 15	a 11	a 13	a 11	: 9
Rock Slough East of Dam	a 10	a 11	a 11	a 18	a 7	a 13	a 12	: 12
Rindge Pump	a 19	d 14	a 16	a 29	a 14	a 14	a 12	: 12
Middle River	a 10	a 11	a 10	a 42	a 55	a 12	a 12	: 11
Mossdale Bridge	b 12	b 10	: 12	b 11	: 13	: 12	: 9	: 8
Port Stockton	:	a 23	:	:	:	: 21	:	:
OCTOBER								
San Francisco, San Pablo and Suisun Bays								
Point Orient	: 1700	: 1660	: 1660	: 1720	: 1780	: 1640	: 1720	: 1720
Point Davis	: 1580	: 1360	:	: 1480	:	: 1340	:	:
Bullshhead Point	:	: 980	: 860	ab 780	a 1060	: 1000	a 1040	:
Bay Point	d 820	:	: 820	: 760	:	:	: 680	: 380
O and A Ferry	a 480	: 500	ab 300	ab 460	: 320	: 300	b 310	ab 280
Innisfail Ferry	: 570	: 570	:	: 550	a 530	: 460	: 500	: 460
Sacramento River Delta								
Collinsville	a d 210	a 200	: 135	: 190	a 150	a 150	: 135	: 155
Emmaton	:	: 18	:	: 10	a 8	:	: 8	: 5
Sacramento	a d 4	a 2	: 1	: 6	a 3	a 3	: 1	: 2
San Joaquin River Delta								
Antioch	: 200	a 105	: 105	: 90	: 125	a 90	a 105	: 85
Webb Pump	:	:	:	:	: 12	:	: 12	:
Opposite Central Landings	: 11	: 8	: 10	ab 4	a 3	a 5	a 4	: 7
Dutch Slough	: 20	a 18	: 18	d 16	a 14	a 15	a 16	: 14
Rock Slough West of Dam	: 9	a 9	: 9	: 11	a 10	a 11	: 11	: 10
Rock Slough East of Dam	: 12	a 11	: 11	: 12	a 13	a 8	: 10	: 9
Rindge Pump	: 13	a 13	: 12	: 12	: 11	: 13	: 13	: 12
Middle River	: 10	a 11	: 10	: 10	: 7	a 9	: 10	a 10
Mossdale Bridge	: 13	b 14	:	: 12	: 8	b 10	: 12	: 11
Port Stockton	:	:	:	:	a 20	a 20	:	:

a, b, c, d, e, f, see footnotes last page of this table.

* Estimated.

TABLE 127

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water
 1941

Station	JANUARY							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
:Point Orient	600	800	1040	1000	760	900	700	600
:Point Davis						220		
:Bullshoed Point	a 18							
:Bay Point								
:O & A Ferry	a 5	a 7	8	6	a 4	ab 5	3	5
:Innisfail Ferry	45	56	62	52	60	44	39	20
Sacramento River Delta								
:Collinsville	6	5	5	3	7		5	4
:Emmaton	4		6	a 4		2	2	
:Sacramento	2	3	3	3	3	1	1	2
San Joaquin River Delta								
:Antioch			8	7	6	5	5	5
:Webb Pump	a 10		a 9	9		7	a 6	
:Opposite Central Landing	3	6	2	5	5	2	1	a 4
:Dutch Slough	a 13	13	12	9	12	10	10	9
:Rock Slough West	9	11	11	8	9	7	9	12
:Rock Slough East	10	9	11	7	12	9	8	11
:Rindge Pump	5	10	5	6	7	7	6	5
:Middle River	8	8	5					b 9
:Mossdale Bridge				4	5			b 5
:Stockton	8		a 3			6	5	4

Station	FEBRUARY							
	2	6	10	14	18	22	26	
San Francisco, San Pablo and Suisun Bays								
:Point Orient	590	960	920	380	660	740	620	
:Point Davis	98		410	48				
:Bullshoed Point			21	9	1	11		
:Bay Point								
:O & A Ferry	a 5	5	17	4	5	6	5	
:Innisfail Ferry	22		24	30	16	17	24	
Sacramento River Delta								
:Collinsville	a 3	3		3	3	4	2	
:Emmaton			ab 4		2			
:Sacramento	2	2	3	3	1	3	2	
San Joaquin River Delta								
:Antioch	6	4	5	4	6	7	6	
:Webb Pump		5	b 7					8
:Opposite Central Landing	3	3	a 3	1	2	5	6	
:Dutch Slough	9	11	10	9	3	9	7	
:Rock Slough West	12	14	14	9	9	16	9	
:Rock Slough East	13	12	13	8	10	12	11	
:Rindge Pump	5	6	9	5	8	8		
:Middle River		7	6	7	6	6	6	
:Mossdale Bridge	2	4	3	2	5	5	6	
:Stockton					6			

a, b, c, d, e, f, see footnotes last page of this table

TABLE 127 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high tide
Salinity expressed in parts of chlorine per 100,000 parts of water
1941

Station	MARCH							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Point Orient	490	430	780	620	770	890	1080	860
Point Davis		50		110	200			
Bullshhead Point	a 13	a 13	ab 10	b 6	7	b 13	b 145	152
Bay Point		8	8	a 6	b 10	a 9		5
O & A Ferry	a 6	ab 5	4	5	a 8	ab 7	b 10	a 6
Innisfail Ferry	a 22	b 10	13	10	25	28	b 29	a 29
	Sacramento River Delta							
Collinsville	a 4	a 3	3	a 5	4	3	5	6
Emmaton	3			4		6	a 5	4
Sacramento	3	2	3	3	6	5	a 2	3
	San Joaquin River Delta							
Antioch	a 4	7	6	5	7	5	a 8	a 6
Webb Pump		7	a 6			a 6		8
Opposite Central Landing	3	2	4	3	4	5	a 2	4
Dutch Slough	6	6	4	6	7	5	a 5	8
Rock Slough West	9	6	10	8	6	7	a 6	8
Rock Slough East	6	7	7	8	5	7	a 4	7
Rindgo Pump	6	7	5	5	4	5	a 4	5
Middle River	6	7	5	5	7	5	b 5	7
Mossdale Bridge	5	5	6	4	4	4	b 5	5
Stockton							b 11	a 10
	APRIL							
	San Francisco, San Pablo and Suisun Bays							
Point Orient	680	670	b 650	720	710	770	b 620	570
Point Davis	300				170	ab 580		
Bullshhead Point	32	8	b 11	10	a 8	b 79	b 66	30
Bay Point		ab 5	a 2		a 6	a 7	a 6	
O & A Ferry	a 5	ab 5	a 3	8	a 6	b 4	a 7	a 5
Innisfail Ferry	29	21	ab 14	a 17	15	a 18	a 23	a 22
	Sacramento River Delta							
Collinsville		5		3	3		6	4
Emmaton		5		3	4			
Sacramento	4	7	b 2	4	5	a 5	5	3
	San Joaquin River Delta							
Antioch	8	7	a 3	4	7	a 8	a 6	a 5
Webb Pump	4	a 7	5		6	a 7		
Opposite Central Landing	4	3	a 5	2	3	a 6	a 4	4
Dutch Slough	8	7	a 10	5	6	a 5	a 11	7
Rock Slough West	8	7	b 6	6	6	a 5	a 6	7
Rock Slough East	7	8	b 8		7	8	a 6	6
Rindgo Pump	7	6		6	8	a 5	6	
Middle River	2	5	b 5	4	5	b 4	b 6	8
Mossdale Bridge	6	3	b 3	4	7	b 5		3
Stockton	11	a 8	b 8		10	b 9		7

a, b, c, d, e, f, see footnotes last page of this table.

TABLE 127 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water
 1941

Station	MAY							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
:Point Orient	:1030	: 940	:b 1200	: 770	: 660	: 1140	:b 920	: 830
:Point Davis	: 340	: 390	:b 490	: 250	: 180	:	:	:
:Bullshoed Point	:a156	:	:b 143	: 11	:a 12	:b 89	:a 15	: 640
:Bay Point	: 8	:a 17	:a 8	: 6	:a 3	: 5	: 7	: 6
:O & A Ferry	:a 4	:a 5	:a 3	: 4	: 6	:b 6	: 6	: 5
:Innisfail Ferry	: 27	:a 23	:a 21	:a 21	: 17	:ab 12	:a 16	:
Sacramento River Delta								
:Collinsville	: 6	: 6	:	: 6	:a 10	:a 3	:b 3	: 4
:Emmaton	: 2	:	:a 4	:	:a 4	:	:b 3	:
:Sacramento	:b 6	:a 4	:b 4	: 3	:a 3	:b 3	:ab 4	: 4
San Joaquin River Delta								
:Antioch	: 8	:a 8	:a 3	:a 2	:a 7	:a 4	:a 5	: 5
:Webb Pump	:	: 7	:	: 3	:	:	:	:
:Opposite Central Landing	: 3	:a 2	:b 2	: 2	:a 3	:b 5	:b 3	: 3
:Dutch Slough	: 9	:a 5	:a 3	: 3	:a 4	:a 3	:a 5	: 4
:Rock Slough East	: 2	:a 2	:a 4	: 4	:a 8	:a 3	:b 5	: 3
:Rock Slough West	: 8	:a 3	:a 4	: 5	:a 5	:a 6	:b 5	: 4
:Rindge Pump	: 5	:a 4	:a 4	: 4	:a 5	:a 6	: 6	: 7
:Middle River	:a 3	:b 5	:b 4	: 2	:a 3	: 4	:b 7	: 3
:Mossdale Bridge	:b 2	:	:ab 3	: 5	:b 4	:b 6	:b 3	: 4
:Stockton	: 4	:a 5	: 9	:ab 5	:a 8	:b 6	:ab 10	:b 7

Station	JUNE							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
:Point Orient	: 730	: 1250	:b 1150	: 1080	: 1080	:b 1100	:b 1280	: 1280
:Point Davis	: 500	: 550	: 600	:	: 400	:	: 570	: 780
:Bullshoed Point	: 97	:	:a 20	:a 44	: 93	:a 225	:a 385	:a 170
:Bay Point	:	: 6	:a 6	:	:a 10	:	:a 9	:
:O & A Ferry	: 5	:b 5	:b 8	: 6	:b 4	:b 3	:b 5	: 5
:Innisfail Ferry	:a 16	:a 9	:a 13	:a 12	: 11	:a 11	:b 11	:a 11
Sacramento River Delta								
:Collinsville	:a 8	:a 3	:a 6	:a 4	:ab 4	:a 5	:a 4	: 3
:Emmaton	:a 5	:	:a 4	:	:a 5	:	:a 3	:
:Sacramento	:a 3	:b 2	:b 3	: 3	: 4	:b 3	:b 2	:a 3
San Joaquin River Delta								
:Antioch	:a 5	:a 3	:a 3	: 4	:a 2	:a 5	:a 5	: 2
:Webb Pump	:	:a 7	:	:a 2	:a 1	:	:	:
:Opposite Central Landing	:a 7	:a 3	: 4	:a 4	:a 3	:a 3	:b 2	:a 4
:Dutch Slough	:a 4	:a 4	:	:a 3	:a 6	:a 4	: 4	:a 2
:Rock Slough East	:a 4	:a 3	:b 2	:ab 3	:a 2	:a 3	:b 3	:a 3
:Rock Slough West	: 4	:a 3	:b 3	:ab 3	:a 4	:a 4	:b 3	:a 4
:Rindge Pump	:a 3	:a 4	:a 2	:a 3	: 2	:a 6	: 6	: 4
:Middle River	:b 3	:b 2	:b 2	:b 5	:b 2	:b 3	:b 3	:a 2
:Mossdale Bridge	:b 3	:b 3	:b 3	:b 4	:b 4	:b 3	:b 5	:
:Stockton	:ab 7	:ab 5	:ab 6	: 5	:b 5	:a 8	:a 10	:b 8

a, b, c, d, e, f, see footnotes last page of this table

TABLE 133 (CONTINUED)

SALINITY OBSERVATIONS SACRAMENTO-SAN JOAQUIN DELTA - 1942
 Samples taken by U. S. Bureau of Reclamation (1)
 Chlorides in parts per million parts of water

Station No.	59a	59c	59h	59n	59s	59u	70	80	81	82	83	84	85	86	87	88	58
S. J. River	22	30	7.3	15	14	6.4	11	30	36	55	60	78	87	88	5.5	19	
at Garwood Br.	16	15	5.9	10	11	0.7	5.2	24	31	57	69	96	31	41	0.7	16	
at Stockton Ship Channel	25	31	9.0	26	17	5.3	14	23	29	39	40	59	33	32	8.3	29	
at Stockton Ship Channel at lower end of wharves	37	36	3.9	5.0	10	4.2	9.8	22	33	36	46	48	46	43	6.1	32	
at Santa Fe RR Crossing	14	15	4.5	3.7	2	4.5	9.3	13	14	16	24	23	20	15	3.6	15	
at Sacramento	9.1	11	3.7	4.5	6.9	6.6	7.3	9.5	9.6	10	11	12	32	11	3.4	9.1	
at S. J. River	17	16	11	17	3.2	12	8.3	12	13	12	11	12	18	13	7.5	13	
at S. J. River	100	85	32	30	70	1300	25	600	30	43	52	46	120	56	28	90	
at Sacramento	71	93	42	29	1200	24	110	820	58	78	88	88	84	91	35	68	
at Sacramento	58	77	23	18	370	15	37	230	56	73	80	81	81	77	17	56	
at Sacramento	83	76	7.4	7.4	290	7.8	25	220	43	60	67	67	92	65	7.8	80	
at Sacramento	7.5	7.5	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	
at Sacramento	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	

(1) Samples not always taken at High Tide.

TABLE 138 (CONTINUED)

SALINITY OBSERVATIONS SACRAMENTO-SAN JOAQUIN DELTA - 1943
 Samples taken by U.S. Bureau of Reclamation (1)
 Chlorides in parts per million parts of water

1943	Station No.	58	59b	59c	59f	59fa	59fb	81	167	59u	59n	88	70	63
January Chlorides:	San Joaquin R. at Mossdale Pt.	7th	31											
February Chlorides:	Trench Camp Slough South of Stockton	2nd	36											2nd
March Chlorides:	Stockton Ship Channel at Burns Cut-off	7th	35											1.1
April Chlorides:	Stockton Slough at East Contra Costa Canal Intake	10th	15											8th
May Chlorides:	Stockton Slough at West Contra Costa Canal Intake	8th	15th	9.7										1.7
June Chlorides:	Stockton Slough at Indian Slough	8th	5.8											4th
July Chlorides:	Stockton Slough at East of Delta	6th	11											1.1
August Chlorides:	Stockton Slough at Sand Mound Slough	10th	27											5th
September Chlorides:	Stockton Slough at Junction of Rock Slough	8th	44											1.8
October Chlorides:	Stockton Slough at Rock Slough	10th	19											6th
November Chlorides:	Stockton Slough at East of Delta	2nd	19											1.2
December Chlorides:	Stockton Slough at East of Delta	3rd	20											2nd
	Stockton Slough at East of Delta	5th	41											1.2
	Stockton Slough at East of Delta	7th	68											3rd
	Stockton Slough at East of Delta	8th	100											1.4
	Stockton Slough at East of Delta	9th	77											2nd
	Stockton Slough at East of Delta	4th	78											1.4
	Stockton Slough at East of Delta	6th	69											6th
	Stockton Slough at East of Delta	10th	83											2.4
	Stockton Slough at East of Delta	8th	100											8th
	Stockton Slough at East of Delta	4th	79											2.6
	Stockton Slough at East of Delta	6th	64											4th
	Stockton Slough at East of Delta	10th	83											1.9
	Stockton Slough at East of Delta	8th	66											6th
	Stockton Slough at East of Delta	4th	83											2.1
	Stockton Slough at East of Delta	6th	63											2.1
	Stockton Slough at East of Delta	10th	83											9.6
	Stockton Slough at East of Delta	8th	66											9.2
	Stockton Slough at East of Delta	4th	79											10th
	Stockton Slough at East of Delta	6th	64											9.6
	Stockton Slough at East of Delta	10th	83											9.2
	Stockton Slough at East of Delta	8th	66											10th
	Stockton Slough at East of Delta	4th	79											9.2
	Stockton Slough at East of Delta	6th	64											9.6
	Stockton Slough at East of Delta	10th	83											9.2
	Stockton Slough at East of Delta	8th	66											10th
	Stockton Slough at East of Delta	4th	79											9.6
	Stockton Slough at East of Delta	6th	64											9.2
	Stockton Slough at East of Delta	10th	83											9.6
	Stockton Slough at East of Delta	8th	66											9.2
	Stockton Slough at East of Delta	4th	79											10th
	Stockton Slough at East of Delta	6th	64											9.6
	Stockton Slough at East of Delta	10th	83											9.2
	Stockton Slough at East of Delta	8th	66											10th
	Stockton Slough at East of Delta	4th	79											9.6
	Stockton Slough at East of Delta	6th	64											9.2
	Stockton Slough at East of Delta	10th	83											9.6
	Stockton Slough at East of Delta	8th	66											9.2
	Stockton Slough at East of Delta	4th	79											10th
	Stockton Slough at East of Delta	6th	64											9.6
	Stockton Slough at East of Delta	10th	83											9.2
	Stockton Slough at East of Delta	8th	66											10th
	Stockton Slough at East of Delta	4th	79											9.6
	Stockton Slough at East of Delta	6th	64											9.2
	Stockton Slough at East of Delta	10th	83											9.6
	Stockton Slough at East of Delta	8th	66											9.2
	Stockton Slough at East of Delta	4th	79											10th
	Stockton Slough at East of Delta	6th	64											9.6
	Stockton Slough at East of Delta	10th	83											9.2
	Stockton Slough at East of Delta	8th	66											10th
	Stockton Slough at East of Delta	4th	79											9.6
	Stockton Slough at East of Delta	6th	64											9.2
	Stockton Slough at East of Delta	10th	83											9.6
	Stockton Slough at East of Delta	8th	66											9.2
	Stockton Slough at East of Delta	4th	79											10th
	Stockton Slough at East of Delta	6th	64											9.6
	Stockton Slough at East of Delta	10th	83											9.2
	Stockton Slough at East of Delta	8th	66											10th
	Stockton Slough at East of Delta	4th	79											9.6
	Stockton Slough at East of Delta	6th	64											9.2
	Stockton Slough at East of Delta	10th	83											9.6
	Stockton Slough at East of Delta	8th	66											9.2
	Stockton Slough at East of Delta	4th	79											10th
	Stockton Slough at East of Delta	6th	64											9.6
	Stockton Slough at East of Delta	10th	83											9.2
	Stockton Slough at East of Delta	8th	66											10th
	Stockton Slough at East of Delta	4th	79											9.6
	Stockton Slough at East of Delta	6th	64											9.2
	Stockton Slough at East of Delta	10th	83											9.6
	Stockton Slough at East of Delta	8th	66											9.2
	Stockton Slough at East of Delta	4th	79											10th
	Stockton Slough at East of Delta	6th	64											9.6
	Stockton Slough at East of Delta	10th	83											9.2
	Stockton Slough at East of Delta	8th	66											10th
	Stockton Slough at East of Delta	4th	79											9.6
	Stockton Slough at East of Delta	6th	64											9.2
	Stockton Slough at East of Delta	10th	83											9.6
	Stockton Slough at East of Delta	8th	66											9.2
	Stockton Slough at East of Delta	4th	79											10th
	Stockton Slough at East of Delta	6th	64											9.6
	Stockton Slough at East of Delta	10th	83											9.2
	Stockton Slough at East of Delta	8th	66											10th
	Stockton Slough at East of Delta	4th	79											9.6
	Stockton Slough at East of Delta	6th	64											9.2
	Stockton Slough at East of Delta	10th	83											9.6
	Stockton Slough at East of Delta	8th	66											9.2
	Stockton Slough at East of Delta	4th	79											10th
	Stockton Slough at East of Delta	6th	64											9.6
	Stockton Slough at East of Delta	10th	83											9.2
	Stockton Slough at East of Delta	8th	66											10th
	Stockton Slough at East of Delta	4th	79											9.6
	Stockton Slough at East of Delta	6th	64											9.2
	Stockton Slough at East of Delta	10th	83											9.6
	Stockton Slough at East of Delta	8th	66											9.2
	Stockton Slough at East of Delta	4th	79											10th
	Stockton Slough at East of Delta	6th	64											9.6
	Stockton Slough at East of Delta	10th	83											9.2
	Stockton Slough at East of Delta	8th	66											10th
	Stockton Slough at East of Delta	4th	79											9.6
	Stockton Slough at East of Delta	6th	64											9.2
	Stockton Slough at East of Delta	10th	83											9.6
	Stockton Slough at East of Delta	8th	66											9.2
	Stockton Slough at East of Delta	4th	79											10th
	Stockton Slough at East of Delta	6th	64											9.6
	Stockton Slough at East of Delta	10th	83											9.2
	Stockton Slough at East of Delta	8th	66											10th
	Stockton Slough at East of Delta	4th	79											9.6
	Stockton Slough at East of Delta	6th	64											9.2
	Stockton Slough at East of Delta	10th												

TABLE 146

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high tide
Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	JANUARY 1944							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Point Davis			920			1160	1220	1140
O & A Ferry							127	92
Innisfail Ferry			b 210	220	220	280	272	254
Grand View			1030	1010	1000	990	1040	960
	Sacramento River Delta							
Collinsville	30	32	11 a	5	7	58		22
Three Mile Slough Bridge	3		4	3	4	4	5	5
Rio Vista Bridge	2	4	3	3	4		4	3
	San Joaquin River Delta							
Antioch	29	15	10	10	8	41	27	19
Opposite Central Landing							a 4	3
Dutch Slough	9	8 a	8 a	8	7	9	7	8
Rock Slough West			8 ab	9	10	9	9	9
Rock Slough East			10	9	9	8	10	8
Middle River					9	8	8	8
Victoria	10	9	8 a	8	8	8 a	8	7

Station	FEBRUARY 1944								
	2	6	10	14	18	22	26		
	San Francisco, San Pablo and Suisun Bays								
Point Orient			1520			1120	1320	1520	1200
Point Davis			1000			740		1140	
O & A Ferry				10	6	5	25	75	
Innisfail Ferry			244	104 b	121 a	130	88	120	128
Grand View			960	780	720	650	690	620	580
	Sacramento River Delta								
Collinsville		17		2	4	3	4	7	3
Three Mile Slough Bridge		4		2	3	2	3	3	3
Rio Vista Bridge		2		1		3	4	4	4
	San Joaquin River Delta								
Antioch		18		6	5	5	4	10	7
Opposite Central Landing		4 ab		2	5	3	3	4	13
Dutch Slough		8		8 a	8	8	9	8	8
Rock Slough West		8		8 ab	7	9	10	9	10
Rock Slough East		9		8	10	11	11	9	9
Ridge Pump				6 a	7	7	8		
East Contra Costa I.D.						12	12	12	12
Middle River		8		8	9	9	9	9	9
Victoria		ab 6	ab	9 a	7	8	7	9	10

a, b, see footnotes last page of this table.

TABLE 146 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	MARCH 1944							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1140	1160	920	1030	1100	1360	1300	1240
Point Davis	520	360	610	620			880	
Benicia					260	466	360	500
O & A Ferry	7	5	5	5	8	5	11	22
Innisfail Ferry	85	115	79		58	59	57	48
Grand View	420	410	420	400	500	620	700	690
Sacramento River Delta								
Collinsville	4		4	3	3	3	3	4
Three Mile Slough Bridge	3	3	4	3	4	3	3	3
Rio Vista Bridge	2	2	3	2	2	3	3	2
San Joaquin River Delta								
Antioch	6	6	5	5	4	4	5	3
Opposite Central Landing	2	1	3	4	3	2	2	2
Dutch Slough	9	9	8	7	6	6	5	5
Rock Slough West	9	10	8	8	6	6	4	4
Rock Slough East	11	11	9	7	7		4	5
E.C.C. Irr. Dist.	14	12	8	7		7	7	7
Middle River	10	7	6	5	5	8	5	3
Victoria	8	6	6	5	5	4	5	5

Station	APRIL 1944							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient		1320	1250		1360	1300	1360	1350
Point Davis						980	820	750
Benicia	640	540	510	450	390	500	400	310
O & A Ferry	7	14	7	17	13	14	32	8
Innisfail Ferry	52		67	51	53	54	50	58
Grand View	700	790	910	960	950	860	990	
Sacramento River Delta								
Collinsville	2	1		1	1	1		2
Three Mile Slough Bridge	2	1	1		1		1	1
Rio Vista Bridge	1	1	1	1	1	1	1	1
San Joaquin River Delta								
Antioch	4	3	2	2	2	3	4	2
Webb Pump		2	3	2	3		2	4
Opposite Central Landing	2	1	1	1	1	2	2	1
Dutch Slough	4	3	3	4	3	4	3	5
Rock Slough West	4	4	4	4	6	4	8	
Rock Slough East	4	5	3	5		8	9	
E.C.C. Irr. Dist.		5	7	8	9	8	7	
Middle River	4	3	3	4	6	9	9	
Victoria	7	7	8	11	8	6	8	5

a, b, see footnotes last page of this table.

TABLE 146 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide
Salinity expressed in parts of chlorine per 100,000 parts of water

Station	MAY 1944							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Point Orient	1110:b	1240:b	1240:	1160:	1400:b	1200:	1180:	1140:
Point Davis	b 710:	b 640:			b 720:	560:	700:	
Benicia	b 570:b	540:b	410:b	240:b	310:b	490:	510:b	440:
O & A Ferry	a 5:a	6:a	4:	2:a	2:b	6:	7:a	4:
Innisfail Ferry	a 54:a	51:ab	43:	42:		42:	28:b	34:
Grand View	980:	880:a	880:	860:b	860:b	880:	880:	860:
	Sacramento River Delta							
Collinsville	a 2:a	1:b	2:	1:a	3:b	2:	2:a	1:
Three Mile Slough Bridge	b 1:b	1:b	1:	1:b	2:b	3:	1:b	1:
Rio Vista Bridge	b 1:b	1:b	1:	1:b	1:b	1:	1:b	1:
	San Joaquin River Delta							
Antioch	ab 4:	2:b	2:	2:a	3:f	3:	3:a	2:
Webb Pump		4:a	3:	3:			a	4:
Opposite Central Landing	a 1:a	1:b	2:	2:b	2:b	1:a	2:a	1:
Dutch Slough	b 6:b	5:b	4:	5:a	5:ab	4:	4:a	4:
Rock Slough West	b 6:b	6:	6:					
Rock Slough East	a 9:b	7:b	7:	7:				
E.C.C. Irr. Dist.	b 6:b	7:b	5:	b	6:b	4:	4:	3:
Middle River	b 7:b	6:b	8:	5:b	5:b	6:	5:	
Victoria	ac 5:b	9:b	4:ab	6:b	4:b	2:af	3:b	2:
Mossdale Bridge	3:a	5:	7:	4:	3:	3:	2:a	3:
	JUNE 1944							
	San Francisco, San Pablo and Suisun Bays							
Point Orient	b 1360:b	1480:	1450:	1330:	1420:b	1310:	1270:	1490:
Point Davis				940:				
Benicia	b 690:	630:	670:	510:b	770:b	770:	580:a	700:
O & A Ferry	a 8:a	9:	a	4:	49:a	96:a	90:a	75:
Innisfail Ferry	a 42:	44:	41:b	43:a	54:a	85:a	115:a	103:
Grand View	b 890:b	950:	960:	950:b	930:b	1020:b	1040:	1030:
	Sacramento River Delta							
Collinsville	a 2:		3:a	2:a	6:b	35:a	31:ab	27:
Three Mile Slough Bridge	b 1:b	1:	2:b	2:b	2:b	2:	3:b	2:
Rio Vista Bridge	b 1:b	1:	2:ab	1:b	2:b	2:b	2:b	1:
	San Joaquin River Delta							
Antioch	a 2:a	3:	4:a	5:a	5:a	9:	16:a	10:
Webb Pump				3:	a	2:	2:a	4:
Opposite Central Landing	a 2:b	2:	3:	a	2:b	3:a	2:a	3:
Dutch Slough	a 5:a	3:	4:a	3:	3:b	4:	3:a	3:
Rock Slough West	b 3:a	2:	3:	a	3:a	5:b	5:	
Rock Slough East	a 3:b	2:						
E.C.C. Irr. Dist.	b	3:	3:b	2:b	2:b	3:	a	
Victoria	b 2:b	2:	2:b	1:b	3:b	4:b	4:	7:
Mossdale Bridge	b 2:b	2:ab	2:ab	4:b	5:ab	8:b	7:ab	9:

a, b, c, f, see footnote last page of this table.

TABLE 146 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high tide
Salinity expressed in parts of chlorine per 100,000 parts of water

Station	JULY 1944								
	2	6	10	14	18	22	26	30	
	San Francisco, San Pablo and Suisun Bays								
Point Orient	:	b	1570:	1490:	1550:	:	1560:	1580:	1620:
Point Davis	:	:	:	:	:	:	1380:	:	:
Benicia	:	b	910:	1110:a	830:	1140:b	1050:	1070:	1030:b
O & A Ferry	:	a	173:	192:	285:a	320:a	345:a	440:a	450:a
Innisfail Ferry	:	a	138:	b	268:	310:a	306:a	395:a	435:a
Grand View	:	ab	1050:	b	1040:	1050:b	1070:	1100:	1130:
	Sacramento River Delta								
Collinsville	:	a	37:	b	178:	158:a	158:	254:a	215:a
Three Mile Slough Bridge	:	b	3:	b	7:	6:b	25:b	19:	21:
Rio Vista Bridge	:	b	2:	b	5:	2:ab	4:b	3:	4:
	San Joaquin River Delta								
Antioch	:	a	10:	a	24:	96:a	74:a	81:	192:
Webb Pump	:	b	4:	:	3:	:	5:	3:a	7:a
Opposite Central Landing	:	a	2:	b	3:	:	3:	4:a	6:a
Dutch Slough	:	a	4:	a	3:	5:a	5:a	7:	11:
Rock Slough West	:	b	6:	:	5:ab	4:a	4:a	6:	7:b
Rock Slough East	:	:	3:	b	5:	4:a	5:b	6:	6:b
E.C.C. Irr. Dist.	:	:	:	b	6:	7:	5:b	9:	8:b
Victoria	:	b	5:	b	6:ab	8:b	7:b	6:	4:a
Mossdale Bridge	:	e	9:	e	9:e	10:ae	8:e	9:e	10:af
	AUGUST 1944								
	San Francisco, San Pablo and Suisun Bays								
Point Orient	:	b	1660:	1720:	1700:	1730:	1690:	1720:f	1590:
Point Davis	:	:	:	:	:	b	1520:	1430:	1490:
Benicia	:	b	1240:	1360:	1230:b	1320:	1350:	1200:	1250:b
O & A Ferry	:	a	460:	:	a	470:a	600:a	590:	580:a
Innisfail Ferry	:	a	505:b	590:b	650:	:	a	700:	710:
Grand View	:	a	1220:	1250:	1250:	1330:	1350:	1340:	1370:a
	Sacramento River Delta								
Collinsville	:	a	255:ab	345:a	345:a	420:a	380:a	470:ab	300:a
Three Mile Slough Bridge	:	:	:	78:	81:	:	128:	106:	98:b
Rio Vista Bridge	:	b	4:	6:	10:b	6:	10:	10:	10:b
Isleton Bridge	:	:	:	:	:	:	:	:	a
	San Joaquin River Delta								
Antioch	:	a	155:	240:	320:a	250:	400:	360:	320:a
Jersey	:	:	:	:	:	:	:	a	85:a
Webb Pump	:	:	10:	19:a	17:	:	24:	28:	:
Opposite Central Landing	:	a	5:	8:a	6:a	10:	14:a	11:a	9:a
Dutch Slough	:	b	27:	21:a	25:a	33:	36:a	41:a	31:a
E. C. C. Irr. Dist.	:	b	8:	9:	9:b	11:	10:	10:b	11:b
Victoria	:	b	8:	:	a	10:a	9:	8:a	9:a
Mossdale Bridge	:	a	10:	12:a	12:f	12:	10:a	12:a	10:

a, b, e, f, see footnote last page of this table.

TABLE 146 (CONTINUED)

SALINITY OBSERVATIONS, S. CRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high tide
Salinity expressed in parts of chlorine per 100,000 parts of water

Station	SEPTEMBER 1944									
	2	6	10	14	18	22	26	30		
	San Francisco, San Pablo and Suisun Bays									
Point Orient	b 1680:	1710:	1660:b	1690:	:	1660:	1670:	:	:	:
Benicia	b 1300:	1330:	:	b 1260:	1220:	1170:	1240:	1140:	:	:
O & A Ferry	a 610:a	620:a	630:a	620:a	730:	510:	460:a	470:	:	:
Innisfail Ferry	a 730:	780:	790:ab	780:	790:	770:	680:a	700:	:	:
Grand View	b 1400:	1410:	1470:b	1460:	1460:	1460:	1480:	1490:	:	:
	Sacramento River Delta									
Collinsville	a 420:	470:a	470:	370:	440:a	320:a	300:a	340:	:	:
Three Mile Slough Bridge	b 161:	134:	:	b 98:	102:	62:	:	:	:	:
Rio Vista Bridge	b 54:	42:b	55:b	46:	20:	8:b	5:	:	:	:
Isleton Bridge	e 4:	5:b	5:	:	4:	3:b	4a	3:	:	:
	San Joaquin River Delta									
Antioch	a 310:	390:a	300:	280:	310:	274:	210:	180:	:	:
Jersey	a 120:	164:	:	126:b	134:	:	74:	56:	:	:
Webb Pump	:	37:	46:b	42:	:	38:	:	29:	:	:
Opposite Central Landing	b 20:	17:a	12:a	13:	13:a	10:a	11:a	14:	:	:
Dutch Slough	b 69:a	68:a	63:a	62:ab	65:n	50:a	45:a	49:	:	:
Rock Slough East	a 11:a	12:	:	b 15:b	15:	14:	14:	15:	:	:
Rock Slough West	:	a 18:a	19:	18:a	18:	18:	19:	:	:	:
E.C.C. Irr. Dist.	b 11:	11:b	11:b	12:	14:	11:b	11:	:	:	:
Victoria	b 10:b	11:ab	11:b	10:ab	10:a	11:b	11:	:	:	:
Mossdale Bridge	b 10:ab	10:b	12:b	11:ab	13:ab	8:	ab	8:	:	:

Station	OCTOBER 1944									
	2	6	10	14	18	22	26	30		
	San Francisco, San Pablo and Suisun Bays									
Point Orient	1680:	:	1630:	1670:	1720:	1650:	1570:	1670:	:	:
Point Davis	:	1480:	1270:	:	:	:	:	:	:	:
Benicia	1180:	1240:	960:	1060:	1110:	1090:	1040:	1110:	:	:
Bay Point	:	:	:	:	:	1540:	:	:	:	:
O & A Ferry	450:	640:	410:	370:	460:	350:	360:	450:	:	:
Innisfail Ferry	670:	650:	:	620:	580:	600:	580:b	580:	:	:
Grand View	1480:	1500:	1510:	1510:	1490:	:	1530:	1480:	:	:
	Sacramento River Delta									
Collinsville	:	a 260:	250:	220:a	200:a	180:	158:	182:	:	:
Three Mile Slough Bridge	:	52:	34:	21:	:	22:	12:	:	:	:
Rio Vista Bridge	4:	7:	4:	:	3:	2:	4:	3:	:	:
Isleton Bridge	3:	3:	3:	2:	2:	2:	:	:	:	:
	San Joaquin River Delta									
Antioch	190:	230:	200:	140:	160:	148:	140:	162:	:	:
Jersey	b 62:a	56:	:	30:	43:a	24:	:	:	:	:
Webb Pump	ab 26:	:	ab 19:	:	:	:	:	:	:	:
Opposite Central Landing	11:a	6:	11:	8:	8:a	5:	4:	8:	:	:
Dutch Slough	ab 42:a	30:	31:	28:a	25:a	22:	19:	17:	:	:
Rock Slough East	b 15:	:	10:	13:	a 10:	10:	10:	10:	:	:
Rock Slough West	:	a 17:ab	21:	:	:	:	:	:	:	:
E.C.C. Irr. Dist.	12:	11:	11:	11:	10:	9:	9:	9:	:	:
Victoria	10:	9:	11:	8:a	7:a	6:	6:	5:	:	:
Mossdale Bridge	ab 8:ae	7:ae	7:ae	7:e	7:ae	8:ae	4:ae	9:	:	:

a, b, e, see footnote last page of this table.

TABLE 146 (CONTINUED)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide.
Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	NOVEMBER - 1944							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Point Orient	1730:	1620:	1590:	1440:	1550:	1240:	1520:	1530:
Benicia	1170:	1000:	890:	620:	630:	470:	790:	910:
O & A Ferry	450:a	290:	290:	35:	61:a	34:	86:	
Innisfail Ferry	b 560:	540:	450:	280:	100:		200:	215:
Grand View	1500:	1450:b	1400:	1340:	1320:	1270:	1250:	1180:
	Sacramento River Delta							
Collinsville	a 170:a	194:	72:	10:a	13:a	5:	3:	10:
Three Mile Slough Bridge	15:	6:	6:	2:		4:	3:	
Rio Vista Bridge	3:	2:	2:	1:		2:	5:	2:
Isleton Bridge	1:	1:	2:			2:	2:	1:
	San Joaquin River Delta							
Antioch	178:	208:	49:	14:	10:	16:	9:	17:
Jersey	ab 20:							
Webb Pump			11:					
Opposite Central Landing	a 6:a	3:a	6:a	4:	6:a	3:	3:	3:
Dutch Slough	18:a	15:	4:	16:	11:a	11:	10:	9:
Rock Slough West	9:b	10:	8:	10:				6:
E.C.C. Irr. Dist.	a	7:	8:					
Victoria	a 11:	a	8:	8:	4:	4:	5:	6:
Mossdale Bridge	a 7:a	8:	5:	5:a	5:	5:	6:a	5:
	DECEMBER - 1944							
	San Francisco, San Pablo and Suisun Bays							
Point Orient	1480:	1370:	1530:	1500:	1560:	1520:	b 1280:	
Point Davis				1140:				
Benicia	880:	510:	650:	930:	700:	760:	560:	410:
O & A Ferry	147:	28:	64:	133:	133:	70:	13:	22:
Innisfail Ferry	220:	180:	200:		232:		300:b	110:
Grand View		1100:	1050:		1040:	1000:	970:	950:
	Sacramento River Delta							
Collinsville	a 15:	3:		25:	10:	5:		2:
Three Mile Slough Bridge	b 3:	2:	3:	4:	3:		2:	1:
Rio Vista Bridge	3:	1:	2:	2:	1:	2:	1:	2:
Isleton Bridge	3:	1:	2:	2:		2:a	1:	4:
	San Joaquin River Delta							
Antioch	21:	8:	7:	11:	18:	14:	4:	4:
Opposite Central Landing	2:	1:	2:	3:a	1:	3:	1:a	1:
Dutch Slough	9:	8:	7:	7:	6:	9:	4:a	7:
Rock Slough East	7:	8:	6:	7:	4:	7:	7:	6:
Victoria								5:
Mossdale Bridge	11:a	7:b	4:	4:a	6:	5:	5:a	4:

a Low high tide.
b Taken on following day.
c Taken two days later

e Taken on preceding day.
f Taken two days earlier.

TABLE 158

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours after
 high high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	JANUARY - 1945							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Point Orient	1300	1100			1350	1410	1420	1320
Grand View	920	840	720	700	750	820	810	800
Benicia	240	520	900	830	580	630	830	490
Innisfail Ferry	abl60	140	150	150	b170	120	120	120
O & A Ferry	16	21	125	53	a35	30	50	41
	Sacramento River Delta							
Collinsville	a3	6	7	5	6	3	6	4
3 Mile Slough Bridge	7	2	3	3	2	3	3	2
Rio Vista Bridge	2	4	2	2	1	1	3	2
Isleton Bridge	a1	a2	3	1	1	a1	3	2
	San Joaquin River Delta							
Antioch	5	6	6	7	5	5	8	7
Jersey	a4		a5					a4
Webb Pump								a11
Opposite Central Landing	a1	a3	a5	4	a3	2	3	a2
Dutch Slough	a6	6	6	7	a7	6	8	a6
Rock Slough (East)	8	7				8	7	5
East Contra Costa I. D.	a3		ab7		a7		8	a8
Victoria	a6	6	7		b5	5	5	2
Mossdale	b4		4	3	a3	7	7	a5
	FEBRUARY - 1945							
	San Francisco, San Pablo and Suisun Bays							
Point Orient	720	440	1110	1130	960	960	1070	
Point Davis							710	
Grand View	550	260	300	a280		a330	390	
Benicia	a340	17	120	70	190	340	340	
O & A Ferry	48	3	3	3	3	3	4	
Innisfail Ferry	140	63	30	33				
	Sacramento River Delta							
Collinsville	a5	2	3	a2	a2	2		
3 Mile Slough Bridge	2	1			a1	1	ab2	
Rio Vista Bridge	3	2	2	2	2	2	1	
Isleton Bridge	2	1	2	2	1	1	b1	
	San Joaquin River Delta							
Antioch	9	2	3	3	3	4	2	
Webb Pump		8		a3		5		
Opposite Central Landing	3	1	1	3	3	1	4	
Dutch Slough	5	9	8	a5	3	3	3	
Rock Slough (East)		a9	ab1	1		e9		
East Contra Costa I. D.	11		5	a2	3	4		
Victoria	ab6	3	2	a2	2	3	3	
Mossdale Bridge	4	3	2	b4		1	1	
	MARCH - 1945							
	San Francisco, San Pablo and Suisun Bays							
Point Orient	970	1290	1390	1380	1180	1140	1130	870
Point Davis					640		ab390	
Grand View	430	430	690	750	750	710	530	490
Benicia	310	460	620	590	310	240	140	70
Innisfail Ferry	40	50	46	38	40	50	60	
O & A Ferry	a3	a3	13	23			2	a3
	Sacramento River Delta							
Collinsville	2	2	1	2	3	2	2	2
3 Mile Slough Bridge		1	2	1	2	1	2	1
Rio Vista Bridge	1	2	2	a1	1	3	2	2
Isleton Bridge		ab1	1	ab2	a1	a1	a1	2
	San Joaquin River Delta							
Antioch	1	3	2	5	7	b4	3	2
Jersey			2	4	3		3	
Webb Pump			6	4			ab3	3
Opposite Central Landing	3	2	2	2	2	1	1	1
Dutch Slough	3	4	3	3	5	1	5	3
Rock Slough (East)			5	3	3	4	4	a6
Rock Slough (West)		ab5		ab4	ab3	ab3	ab4	a4
East Contra Costa I. D.	5			ab4	6	3	ab5	2
Victoria	2	6	4	4	4		2	1
Mossdale Bridge	b2	b3	ab2	ab2		1	3	2

NOTE: See last page of this table for notes a, b, c, d and e.

TABLE 158 (CONT'D)

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SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours after
 high high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	APRIL - 1945							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Point Orient	940	1220	b1140	1410	b1280	1090	b1220	1120
Point Davis	b440		b690		530	b660	b760	660
Grand View	590	550	b750	820	830	b770	b820	850
Benicia	100	340	340	360	410	b300	b250	380
Innisfail Ferry	62	57	ab47	31	23	a37	ab41	31
O & A Ferry	2	3	a4	a4	7	a4	a2	a2
	Sacramento River Delta							
Collinsville	2	3	a2	2	2	2	a1	a1
3 Mile Slough Bridge	a1	2	b1		2	b1	b4	a2
Rio Vista Bridge	2	3	b2	1	1	abl	b1	2
Isleton Bridge	a2	c1	1	1	1		1	1
	San Joaquin River Delta							
Antioch	2	2	a2	a3	3	a2	a2	a2
Jersey	b2	b2	b2		b3		b3	2
Webb Pump			b3			a3		
Opposite Central Landing	3	a1	1	1	1	a1	a1	1
Dutch Slough	2	2	a3	3	4	a3	a3	3
Rock Slough (East)	4	4	a3					
Rock Slough (West)	ab8	ab4	b3					
East Contra Costa I. D.		4	b4		5		b5	
Victoria	1	1	a3	ab3	ab3	5	b3	2
Mossdale Bridge	ab2	abl	b3	ab3	3	b2	b3	
	MAY - 1945							
	San Francisco, San Pablo and Suisun Bays							
Point Orient	1190	1000	b1220	960	880	b1130	970	
Point Davis			b610		400	630		660
Grand View	830	b750	b820	800	a690		b790	810
Benicia	340		b310	310	200	400	490	420
Innisfail Ferry	31	a37	ab24	a22	a24	a24	bkn	a20
O & A Ferry	4	a1	a1	a2	a2	a2	a3	2
	Sacramento River Delta							
Collinsville	2	a1	a1	1	1	1	a1	2
3 Mile Slough Bridge	1	b1	b1	1	b1	b1	b1	2
Rio Vista Bridge	1	b1	b1	1	b1	b1	b2	2
Isleton Bridge	abl	abl	b1	1		a2		a1
	San Joaquin River Delta							
Antioch	2	a2	a1	1	a1	a1	a2	1
Jersey					a1	a1		
Webb Pump	3	a2					b1	2
Opposite Central Landing	1	a1	a1	1	a1	a1	b1	a1
Dutch Slough	3	a5	a2	1	a1	1	2	2
East Contra Costa I.D.	1	a1	b2	1	a2	1	b3	2
Victoria	2	b1	b1	1	a1	b2	b2	2
Mossdale Bridge	2	a1	b1		a3			
	JUNE - 1945							
	San Francisco, San Pablo and Suisun Bays							
Point Orient	1290	1380	b1370	1350	1100	b1430	b1430	1390
Point Davis	600	800	b640		760	b880	b910	770
Grand View	830						b860	870
Benicia	280	b530	b490	470	b620	b720		510
Innisfail Ferry	19	a17	a17	14	a17	a21	a39	37
O & A Ferry	3	a4	a7	5	a2	a15	a12	20
Pittsburg			b3	a3	b1	b6	a4	a6
	Sacramento River Delta							
Collinsville	2	a3	b1	2	a1	a2	b2	2
Emmaton				a2				
3 Mile Slough Bridge	1		b1	2	b1		b2	3
Rio Vista Bridge	1	b1	b2	3	b2	b2	b1	2
Isleton Bridge		a1	b2	1	b2	b1	a1	2
	San Joaquin River Delta							
Winter Island			b2	a5	1	3	b3	6
Antioch	1	a1	a3	3	a2	a4	a2	3
Millers Harbor			b2	3	1	b2	b2	2
Jersey				2				
Webb Pump	2		a3	3	a2		b1	1
Opposite Central Landing	2	1	b1	3	a1	a1	a1	2
Dutch Slough	3	a2	a2	2	a2	a1	b2	3
East Contra Costa I.D.		b2	b2	3	a1	b1	b1	2
Victoria	b3	2	b2	1	b1	b1	b2	3
Mossdale Bridge			b1	1	1	b1	b2	3

NOTE: See last page of this table for notes a, b, c, d and e.

TABLE 158 (CONT'D)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours after
 high high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water.

	JULY - 1945							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Point Orient		1630	1520	1430	1560	1470	1530	1510
Point Davis	700	900	1120	1140	1060	1160		
Grand View	840	880	870	900	950	970	980	980
Benicia			a530	570	870	840	950	850
Innisfail Ferry	38	a40	a74	a89	a82			198
O & A Ferry	a16	a32	a72	a87	a42	a67	a85	a194
Pittsburg	a13	a15	38	a38	a32	a28	a37	
	Sacramento River Delta							
Collinsville	a2	a4	19	a15		a21	59	a56
Emmaton			a2	1				
3 Mile Slough Bridge	b1	a2	a2	3	b3	2	2	2
Rio Vista Bridge	abc2	2	3	2	b3	4	1	2
Isleton Bridge		2	2	a2	a2	2	3	a3
	San Joaquin River Delta							
Winter Island	a5	a7	a14	a15	a16	a19	a31	54
Antioch	a4	7	11	11	a6	19	a16	39
Millers Harbor	b3	3	8	6	b10	14	21	20
Jersey	ac5	a1	ab2				a2	
Webb Pump		a3	2	a3	a2		2	
Opposite Central Landing	a1	a2	2	a3	a3	a3	2	a2
Dutch Slough		a1	2	2	a2	a2	2	a4
East Contra Costa I. D.		2	3	a3	a5		5	a7
Victoria			3	b3	b7	3	5	
Mossdale Bridge	a2	2	3	5	a6	8	9	a10
	AUGUST - 1945							
	San Francisco, San Pablo and Suisun Bays							
Point Orient	1590*	1570	a1550	a1490	1460	1650*	1620	1530
Point Davis			1240		1250			
Grand View	a1040	a1030	1080	1100	1130	1130	b1180	1160
Benicia	980	1090	990	940		1110	900	1120
Innisfail Ferry	a166	a234	288	264		288	346	
O & A Ferry	a124	a198	a82	a116	a164	a212	a246	bkn
Pittsburg	a99	123	77	a102	a88	a82	a134	108
	Sacramento River Delta							
Collinsville	a49	a37	99	a68	a30	a60	a88	a70
3 Mile Slough Bridge	b5	4	3	3	b3	a3	4	b4
Rio Vista Bridge	b1	1*	3	2	2	2	2	b3
Isleton Bridge	a3		3	3			a3	
	San Joaquin River Delta							
Winter Island	a46	a74	a72	a85	a46		a123	a78
Antioch	a23	88	73	42	24	88	60	a44
Millers Harbor	a39	28	40	28				b31
Jersey	a4				a4			a6
Webb Pump	a3	4	2		ae4	a4	5	a6
Opposite Central Landing	a3	a3	3	a2	a2	a2	a5	4
Dutch Slough	a4	a3	5	a4	a5	a4	a6	a5
East Contra Costa I.D.		7	9	10	a10		9	a10
Victoria	a8	b7	9	a9	b6	8	7	
Mossdale Bridge	a9	9	9	a6	a10		8	8
	SEPTEMBER - 1945							
	San Francisco, San Pablo and Suisun Bays							
Point Orient	e1620	1670	1590	1800	e1790	1800	1590	1620
Point Davis	e1340							
Grand View		1190	1200	1370	e1410	1390	1420	1430
Benicia	730	1040	980	1040	1230	1040	1090	b1060
Innisfail Ferry			b360	a168	a385	e440	410	a430
O & A Ferry	a206	a220	a214	a260	a260	182	a141	a145
Pittsburg	a112	a76	a112	140	b160	76	a70	a85
	Sacramento River Delta							
Collinsville	a35	a100	a114	86	a104	70	a42	a10
3 Mile Slough Bridge	5		3	5	3		4	a4
Rio Vista Bridge	2	2	3	3	2	3	1	2
Isleton Bridge	2	3	3	a2	3	3	2	2
	San Joaquin River Delta							
Winter Island	a83	a79	a94	71	a74	72	a50	
Antioch	96	92	66	72	80	50	43	29
Millers Harbor	64	bkn	43	40	48	31	31	25
Webb Pump		5	a4		a5			
Opposite Central Landing	a4		a4	a4	a2	4	a2	a3
Dutch Slough	a6	8	a6	a8	a8	a6	a7	a6
East Contra Costa I.D.		9	a8		9	11	a7	
Victoria	7	8	9	b9	7	6	a7	
Mossdale Bridge	e7	e8	a7	a6	7	7	a6	a7

* No tide given.

Note: See last page of this table for notes a, b, c, d and e.

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours after
 high high tide
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	OCTOBER - 1945							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Point Orient	1780	1540		1430	b1320	1500	1570	1490
Point Davis				880		1250		1260
Grand View	1390	1260	1250	1300	1170	1200	1240	1210
Benicia	690	960	890	990	770	960		
Innisfail Ferry	a350	340	320	b270	250	220	240	300
O & A Ferry	a145	100	132	a55	92	110	231	240
Pittsburg	a44		44	a28		29	a30	125
	Sacramento River Delta							
Collinsville	33	34	a26	a4	19	23	a21	36
3 Mile Slough Bridge	6	2		3	3	3	3	4
Rio Vista Bridge	2	2	1	2	2	3	2	2
Isleton Bridge	2	1	1	a3	a3	a1		2
	San Joaquin River Delta							
Winter Island	a38	44	30	a18	15	24	43	41
Antioch	34	33	20	18	12	16	29	29
Millers Harbor	22	19	13	10	6		17	17
Webb Pump				a6	5	a6		5
Opposite Central Landing	a2	3	1	a2	3	3	a3	4
Dutch Slough	6	a5	a6	a7	5	a7	a6	6
East Contra Costa I. D.		8	10			a7	a7	6
Victoria		7	9	b5		4	b5	6
Mossdale Bridge	6	ab5	3	a6	a3	5	6	6
	NOVEMBER - 1945							
	San Francisco, San Pablo and Suisun Bays							
Point Orient	1430	1360		1340				1250
Point Davis	1040		970					
Grand View	b1170	1170	1150	1180	1150	1120	1090	
Dowrelios Harbor*						880	770	
Benicia	730	650	750	540	700	730	600	670
Martinez**						590	310	360
Innisfail Ferry	280	210	b180	180	158		138	140
O & A Ferry	80	70	67	104	81	47	26	23
Pittsburg	41	47	a19	14	49	a18	12	6
	Sacramento River Delta							
Collinsville	9	8	3	4	4	a4		2
3 Mile Slough Bridge	2	3	4	2	3	2	2	2
Rio Vista Bridge	3	1	1	1	2	1	2	2
Isleton Bridge		2	a1	a1	1		1	1
	San Joaquin River Delta							
Winter Island		all		9	9	12	7	7
Antioch	13	13	8	7	8	8	5	5
Millers Harbor	10	9	7	a4	6	6		5
Opposite Central Landing	2	a2	a3	3	3	4	3	1
Dutch Slough	7	8	a5	a8	a6	a6	a6	5
East Contra Costa I.D.	8	a7	a8	bkn	7		6	5
Victoria	8	6	8	5	5	3	4	4
Mossdale Bridge	a7	a7	a4	a5	a6	b6	4	a4
	DECEMBER - 1945							
	San Francisco, San Pablo and Suisun Bays							
Point Orient	1130	1290	1150	1130			a640	
Point Davis		680	a430	840				100
Grand View	1040	900	850	820	730	620	410	75
Dowrelios Harbor*		570	a330	870		890		
Benicia	570	460	500	360	720	680	90	15
Martinez**	a500		230	as290	470	620	30	a6
Innisfail Ferry	136	b118	92	108	58	b88	114	30
O & A Ferry	3	8	a3	13	37	53	6	
Pittsburg	5	6	a4	3	16	25	3	3
	Sacramento River Delta							
Collinsville	2	2	3	bkn	3	a2	b1	
3 Mile Slough Bridge	1	1	1	1	2	3	1	1
Rio Vista Bridge	3	1	1	1	2	2	2	1
Isleton Bridge			2	1	1			
	San Joaquin River Delta							
Winter Island	b6	4	3	bkn	4	9	ab4	
Antioch	4	4	4	3	3	6	4	4
Millers Harbor	a5	4	3	3	6	5	6	2
Webb Pump								4
Opposite Central Landing	a2	1	a2	1	2	a2	1	1
Dutch Slough	6	a5	a5	6	5	a10	9	6
East Contra Costa I.D.		a6	a6	6	6	a5	7	
Victoria	5	4	a4	bkn	4	5	4	5
Mossdale Bridge	a3	a4	6	7	b5	4	5	a2

* Dowrelios Harbor is a new station located on south shore Carquinez Straits, 1000 feet below Carquinez Bridge.
 ** Martinez is a new station located at Martinez Ferry slip, about one and one-half miles below Bullshead Point.
 (a) Taken at low high tide. (d) Over 1 hour off scheduled time.
 (b) Taken on following day (e) Taken on preceding day.
 (c) Taken two days later

TABLE 160

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after
high high tide
Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	JANUARY - 1946							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient				ab920			690	1140
Hercules*								610
Point Davis				350	410	340		
Grand View	137	b110	115	160	200	200	260	470
Dowrelios	88		156		270		520	
Benicia	17	3	103	280	180	130		510
Martinez	30	1	40	172	100	180	a200	148
Innisfall	23	19	b22	18	16	30	31	39
O & A Ferry	2	bkn	1	1	2	3	a3	a5
Pittsburg	2	3	3	2	3	3	3	2
Sacramento River Delta								
Collinsville	1	a2	1	1	2	1	2	1
3 Mile Slough Bridge	1	1	1	1	2	1	2	1
Rio Vista Bridge	1	1	1	1	1	1	1	2
Isleton Bridge	a1	1	1	abl	1	1	2	2
San Joaquin River Delta								
Winter Island			2	2	2	3	2	a3
Antioch	2	2	4	4	3	2	5	2
Millers Harbor	2	3	4	2	3	a3	b2	2
Webb Pump		a3						
Opposite Central Landing	1	a1	2	1	a2	a2	1	1
Dutch Slough	5	a4	4	6	4	7	3	4
East Contra Costa I.D.	5			5				
Victoria	3	3	ab3	4	3	3	3	4
Mossdale	a2	a3	2	2	a2	4	3	3
FEBRUARY - 1946								
San Francisco, San Pablo and Suisun Bays								
Point Orient	1290	1250	1130	1120	1310	1280		
Point Pinole**				920	870		860	
Hercules	980	660	730	900	790	790	770	
Point Davis	860		660	800	690	660		
Grand View	580	530	560	590	b580	560	580	
Dowrelios				650	500	570		
Benicia	490	160	500	390	120	430	410	
Martinez	370	100	240	420	260	290	470	
Innisfall Ferry	15	36	31	bkn	38	b43	45	
Nichols*				64	20	32	31	
O & A Ferry	8	21	3	7	5	4	3	
Pittsburg	b3	3	2	4	4	5	4	
Sacramento River Delta								
Collinsville	1	2	1	2	a1	1	1	
3 Mile Slough Bridge		1	1	1	1	1	2	
Rio Vista Bridge	1	a2	1	1	1	1	1	
Isleton Bridge		1	1	1	1	1	1	
San Joaquin River Delta								
Winter Island	3	3	2	3	4	a4	3	
Antioch	3	3	2	2	2	4	3	
Millers Harbor	2	2	2	3	3	a3	2	
Webb Pump		3					4	
Opposite Central Landing	1	1	1	abl	2	2	1	
Dutch Slough	a5	5	5	4	5	5	5	
East Contra Costa I.D.		5	6	6	a7		6	
Victoria	4	3	4	5	4	5	4	
Mossdale	a3	4	5	3	a5	3	5	

* New station established January 26, 1946.

** New station established in February, 1946.

(a) Taken at Low High Tide.

(b) Taken on following day.

TABLE 160 (CONT'D)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after
high high tide
Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	MARCH - 1946							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1160	1090	1380	1300	1180	1240	1330	1370
Point San Pedro*			1200	1150	a1080	1030	700	1160
Point Pinole	c810	a930	b840	760	a900		670	
Hercules	850	740	940	830	a750	690	750	
Point Davis	780	620					680	
Grand View	650	780	820	620	880	840	800	
Dowrelios	700	a510		510		a490	650	
Benicia	500	300	630	320	d110	310	380	560
Martinez	540	a120	380	230	120	220	420	580
Innisfail	47	49	27	44	a45	37	44	43
Nichols	26	12	7		a12	a11	18	155
O & A Ferry	11	a4	6	4	a4	3	16	9
Pittsburg	a3	4	3	3	a12	1	2	3
Sacramento River Delta								
Collinsville	1	1	2	2	2	1	2	2
3 Mile Slough Bridge	2	1	1	1	1	1	1	1
Rio Vista Bridge	1	2	1	2	2	1	1	1
Isleton Bridge	1	1	1	1	1	1	1	1
San Joaquin River Delta								
Winter Island		3	4		a2	2	2	3
Antioch	3	3	3	3	a3	2	2	1
Millers Harbor		8	ab4	3	3	3	7	9
Webb Pump		5		5	a2		4	
Opposite Central Landing		2	3	1	a1	2	1	1
Dutch Slough	5	3	5	4	5	a5	5	5
East Contra Costa I.D.					6	7	8	
Victoria	4	5	7	5	10	8	7	6
Mossdale	ab4	6	5	9		7	6	7
APRIL - 1946								
San Francisco, San Pablo and Suisun Bays								
Point Orient	b1280	1310	1160	b1370	bkn	1230	1190	1300
Point San Pedro	a1060	a1020	970	1100	1040	a790	a1010	1140
Point Pinole	a820		660	ab930	a960		a670	a730
Hercules	a750	750	500	ab930	a810	490		810
Point Davis			850		630	e500	bkn	720
Grand View	b750	730	740	b740	670	710	710	810
Dowrelios			270					
Benicia	b310	340	260	b350	450	158	b390	340
Martinez	a22	a180	110	b140	190	130	b200	200
Innisfail	a46	29	39	a37	a36	38	a31	a36
Nichols	b12	18		b18	a6	2	b16	8
O & A Ferry	bkn	2	2	a3	a2	2	a2	a4
Pittsburg	a1	1	2	a2	a2	a2	a3	a3
Sacramento River Delta								
Collinsville	a2	2	2	a2	1	1	a2	a4
3 Mile Slough Bridge	2	1	a2	ab2	1			
Rio Vista Bridge	b1	1	1	b1	1	1	b2	1
Isleton	b1		1	a1	1	f1	b1	a3
San Joaquin River Delta								
Winter Island	a3	a2		a3		2	a1	a4
Antioch	2	2	3	a3	2	2	a3	a3
Millers Harbor	b2	5	3	b10	4	2	b3	
Webb Pump		4				4	a4	
Opposite Central Landing	a1	2	1	a1	1	1	a1	a2
Dutch Slough	5	6	5	a5	4	4	a5	a5
East Contra Costa I.D.	b9	8	5		4	5	a3	
Victoria	bkn	ab5	2	b4	4	2	b2	1
Mossdale	4	2	3	b6	3	1	b1	2

* New station established in March, 1946.

- (a) Taken at Low High Tide.
- (b) Taken on following day.
- (c) Taken two days later.
- (d) Over one hour off schedule.
- (e) Taken on preceding day.
- (f) Taken two days earlier.

TABLE 160 (CONT'D)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after
high high tide
Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	MAY - 1946							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	b1030		820	b1250	1150	980	1240	1260
Point San Pedro	960	900	ab870	1040	a980	960	a960	1100
Point Pinole	a870		a830	1010	a900		790	a800
Hercules	690	600	b620	b860	b690	480		a860
Point Davis	b720		540		450	340		b780
Grand View	b890	830	780	b710	b660	650	610	790
Dowrslios					a310			
Benicia	b380	240	b260	b310	b260	110	b470	b500
Martinez		80	b140	a60	b130	90	b230	b350
Innisfail	a21	14				16	a21	
Nichols	24	3	b3		b3	2	b7	b7
O & A Ferry	a3	a3	3	a2	a2	a1	a3	a5
Pittsburg	abl	2	a2	a2	b1	1	1	a4
Sacramento River Delta								
Collinsville	a2	1	a1	a1	b1	2	a1	a4
3 Mile Slough Bridge		1	b1		b3	2		
Rio Vista	b1	1	b1	b1	b1	1	b2	b1
Isleton		1			b1	2	b1	b3
San Joaquin River Delta								
Winter Island	a2	2	a2	a3	a1	ab3	a2	a3
Antioch	b3	1	a1	a2	a2	1	a2	a3
Millers Harbor	b2	1	b2	ab3	b5	2	b2	2
Webb Pump	b3	2		a2	ab2		1	
Opposite Central Landing	a1	2	a1	a1	b1	a2	bkn	1
Dutch Slough	b3	2	a3	a2	a2	1	a1	a1
East Contra Costa I.D.	b2	2	abl	abl	b1	2	a2	b3
Victoria		ab2	a1	a2	2	2	b3	2
Mossdale	b1	1	b1	b2	bkn	1	b1	b2
JUNE - 1946								
San Francisco, San Pablo and Suisun Bays								
Point Orient	1260	960	1270	b1370	1450	1330	1490	1610
Point San Pedro	all60	1070	1150	all00	1200	a1330	a1440	ael420
Point Pinole		700	a920	*			a1220	
Hercules			730	b880	940	1110		
Point Davis		660	b600	b830	640	1020	1110	1110
Grand View	790	920	940	b910	980	bkn	c1140	1130
Dowrslios		330		a670			a1010	
Benicia	510	370	b520	b590	600	710	b930	
Martinez	380	240	b390	ab470		780	b760	940
Innisfail	b9		a20		19	22	32	125
Nichols	65	11	b102	b159	a97	a285	b460	530
O & A Ferry	4	a2	a5	a9	a26	a24	a37	a73
Pittsburg	4	a3	a3	a4	4	a16	ae33	ae38
Sacramento River Delta								
Collinsville	1		a1	a1	2	a3	all	52
3 Mile Slough Bridge	1	b2	abl	b1	2	b1	b3	4
Rio Vista Bridge	1	b2	b1	b2	1	b1	b2	2
Isleton	bkn	b1	b1		2		b2	2
San Joaquin River Delta								
Winter Island	a4	b2	a8		5	a7	b27	ae21
Antioch	4		a2	a3	3	a4	a6	30
Millers Harbor	4	b1	b1	b3	3	b2	b9	14
Webb Pump		a1	a2		2	a3	a3	
Opposite Central Landing		a2	a2	a3	2	a2	a1	ae2
Dutch Slough	a2	a1	a1	a2	b4	a1	a2	ae3
East Contra Costa I.D.	b3	2	a2	b3	3		b4	bkn
Victoria	1	b1	b1	b1	2	b4	4	3
Mossdale	bkn	1	1	b3	4	b6	b10	10

- (a) Taken at Low High Tide.
 (b) Taken on following day.
 (c) Taken two days later.
 (e) Taken on preceding day.

TABLE 160 (CONT'D)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide
Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	JULY - 1946							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1630	1580	1700	b1590	1590	1580	1610	1530
Point San Pedro	1480	a1450	ab1390	a1470	1510	b1550	ab1510	1610
Point Pinole			ab1350			a1460		
Hercules	1250	1360	b1290	b1250		1390		1510
Point Davis							b1320	1330
Grand View	1180	1180	b1120	b1140	1200	a1210	b1210	1250
Dowrelios			ab1070					
Benicia			b970	b980	950			1120
Martinez		710	b980	b900	770	720		940
Innisfail	a133	a132	ac167	210	a240		b310	330
Nichols	90	530	b380	470	530	670	b760	410
O & A Ferry	143	a75	ab163	a160	ab260	200	ab210	a230
Pittsburg	a57	50	ab62	a77	a187	a100	ab101	120
Sacramento River Delta								
Collinsville	42	a31	ab43	a15		69	ab102	130
3 Mile Slough Bridge	2		b3	b4	4	4		8
Rio Vista Bridge		b2	b2	b2	3	b2	b3	3
Isleton	2	b2	b3			b2		2
San Joaquin River Delta								
Winter Island	54		a51	ab91	71	ab89	ab81	
Antioch	27	b28	a18	a27	bkn	71	a35	a65
Webb Pump	3		ab3		5	a3	ab6	5
Opposite Central Landing	2	a3	ab3	a1	2	a3	ab4	4
Dutch Slough	4	a3	b3	a6	4	a4	b6	7
East Contra Costa I.D.			b8	b10	10		ab8	a8
Victoria		b7	b9	b9	ab9	b8	b7	8
Mossdale	10	b9	b9	b10	12	a3	14	10
AUGUST - 1946								
San Francisco, San Pablo and Suisun Bays								
Point Orient		1660	1720	b1690	1520	1660	1710	1660
Point San Pedro	1510	1520	ab1620	1600	d1550	1630	b1560	1580
Point Pinole		ab1450		ab1510		ab1490	a1530	
Hercules	1390	1450	b1450	bkn	1490	1460	b1490	1450
Point Davis	1200	1350	b1410		1380	1380	ab1430	1250
Grand View	1250	1300	b1270	b1340	1340	1320	b1350	1340
Benicia	1000	980	b1200	b1050	1040	1180	b1140	920
Martinez	760	1040	b960	b950	b880		990	1110
West Suisun*	720	930	b1000	b850	950	1020	840	
Innisfail		ab340	ab360	a400	a450	ab410	a430	440
Port Chicago*	740	830	b820	b820	770	950	900	690
Nichols	610	690	b750	b500	670	b800		590
O & A Ferry	a290	ab240	b260	310	a230	ab270	a350	340
Pittsburg	130	ab140	b170	a190	a210	ab210	a160	150
Sacramento River Delta								
Collinsville	114	ab101	ab137	ab170	87	b122	a144	a117
3 Mile Slough Bridge	6	bkn		b8		b7	b8	
Rio Vista Bridge	3	b2	b4	b2	2	b3	b2	3
Isleton			b3	b2	a3	b2		4
San Joaquin River Delta								
Winter Island	a97	ab96	ab109	a133	a118	ab108	a118	
Antioch**	a69	109	a61	a87	99	a58	a75	82
Millers Harbor		b12	b37	b72	ab31	b93	30	43
Webb Pump		ab5	ab8	b8		ab8		
Opposite Central Landing	a4	ab4	b4	4	a5	ab2	ab3	a4
Dutch Slough	a6	ab6	ab10	a13	a11	ab12	a11	11
East Contra Costa I.D.		b9	11	b11		a13		
Victoria	b8	b9	b6	10	b9	10	a9	11
Mossdale	a11		b11	b12	a11	14	b10	a10

* New station established August 1, 1947.

** Additional measurements were made by the U. S. Bureau of Reclamation at Antioch during August as follows: August 9--135, August 16--105, August 22--145 and August 30--96.

- (a) Taken at Low High Tide.
 (b) Taken on following day.
 (c) Taken two days later.
 (d) Taken over one hour off scheduled time.
 (e) Taken on preceding day.

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after
high high tide
Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	SEPTEMBER - 1946							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	e1550	1630	b1680	1680	1640	1680	1700	e1570
Point San Pedro	a1500	1630	b1620	b1610	1560	ab1590	1590	e1600
Point Pinole		a1490			b1400	ab1470	1450	
Hercules	1320	1430	b1420	1480	1300	b1470	*1420	e1390
Point Davis	1250		b1310	1260	1290	b1350	1330	*1280
Grand View		e1360	b1380	1360	1370	b1370	1380	e1360
Crockett**							1270	e1240
Benicia	980	1070	b1090	1000	1050	b1110	1070	e780
Martinez		1020	b900		980		810	e860
West Suisun	940	e930	980	900	750	950	790	920
Innisfail	440	e430		b400	420	ab410	430	430
Port Chicago	b640	660	810	820	*700	a620	680	
Nichols	410		b570	680	640	b640	610	e430
O & A Ferry	a200	a220	ab220	250	ab160	ab250	260	e180
Pittsburg	a90	a121	ab109	120	ab82	ab150	130	e107
Sacramento River Delta								
Collinsville	a62		ab83	a78	a66	ab68	ab78	
3 Mile Slough Bridge		6	*5	5	ab5	5	a6	e5
Rio Vista Bridge	3		b5	3	4	b4	*3	*3
Isleton				a3	2	b2		e2
San Joaquin River Delta								
Winter Island			ab76	a89	81	ab76	91	
Antioch	76	86	a45	69	73	73	61	67
Millers Harbor	51	29	b42	40	35	b41	ab31	e36
Webb Pump			b6			ab9		
Opposite Central Landing	a5	a5	b5	8	ab6	ab3	4	ae4
Dutch Slough	a8	a8	ab9	9	ab7		9	e8
East Contra Costa I.D.		a12		a12		b11		
Victoria	b12	11	b10	10	ab9	b11	10	e10
Mossdale	a9	10	b9	a9	ab10	b10	ab10	ae11
OCTOBER - 1946								
San Francisco, San Pablo and Suisun Bays								
Point Orient	b1570	1580	b1640	1680	1640	b1650	1450	1460
Point San Pedro	1540	ac1440	b1480	1640	ab1430	a1570	1550	1510
Point Pinole	a1260	ab1420	b1360			1380		
Hercules		1300	b1440	1420	1280	b1360	1340	1280
Point Davis	1240	1280	b1360	1660	1170	b1230	b1210	1190
Grand View	1340	1500	b1380	1400	1370	b1330	b1380	1340
Crockett	1090	1100	b1240	1400	1150		a1230	1110
Benicia	1020	b1000	b980	1080	970	*890	1000	810
Martinez		b960		930	880	b660	a1020	760
West Suisun	710	720	b680	990	730	670	850	650
Innisfail	410	ac390	380	380	a380	a340	330	370
Port Chicago	560	a530	a750		ab510	a660	690	ab520
Nichols		b500	*b580	590		480	500	
O & A Ferry	210	ab150	b200	a230	ab230	a190	200	a160
Pittsburg	120	ab47	88	177	ab50	a46	110	60
Sacramento River Delta								
Collinsville	a53	ab56	b42	68	ab20	a39	65	a18
3 Mile Slough Bridge	4	b3	b4	3	3		3	bkn
Rio Vista Bridge	ab5	b2	b5	*5	b1	b2	5	2
Isleton	2		b2	a4	b1	b2		
San Joaquin River Delta								
Winter Island	ab47		b52	a50	ab41	a45	54	a31
Antioch	53	bkn	26	80	31	a25	34	30
Millers Harbor	29	b16	b20	40	b19	b16	b22	17
Webb Pump			ab8	a8	ab6		8	
Opposite Central Landing	ab4	a3	b4	a4	ab5	a2	a4	a3
Dutch Slough	ab10	ab8	b7	8	ab8	a7	7	a9
East Contra Costa I.D.	ab11	ab13	14			a16	a15	
Victoria	b10	b10	b9	9	b8	b8	8	10
Mossdale	ab9	b9	ab9	a8	ab8	b8	a10	a9

* No tide given.

** New station established September 24, 1946, to supersede former station "Dowrelios Harbor."

(a) Taken at Low High Tide.

(b) Taken on following day.

(c) Taken two days later.

(e) Taken on preceding day.

TABLE 160 (CONT'D)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide
Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	NOVEMBER - 1946							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	b1320	b1560	1740	1520	b1640	b1500	1500	1510
Point San Pedro		b1530	1590	ab1550	b1600	*1550	1380	e1200
Point Pinole		b1370		ab1400	1400		1220	
Hercules	b1100	b1350	1340	1330	b1340	b1290	1070	e960
Point Davis	b1210	a1280		*1320	b1280	b1200	920	e1040
Grand View	1370	b1310	1280	1270	b1280	b1200	1230	e1220
Crockett		b1030	1270	1120	b1150		840	e790
Benicia	b800	b1030	1190	1130	b1080	b920	670	e500
Martinez	b720	b1090		980	b900		480	e530
Innisfail	c360	b350	370	ab380	b370	b350	170	a220
Nichols	b450	b700	700	650		470	200	
O & A Ferry	b70	b180	270	ab240	b160	b157	30	e31
Pittsburg	b23	b110	120	200	b180	b72	a10	e10
Sacramento River Delta								
Collinsville	b14	b130	83	ab41	b75	b31	a6	4
3 Mile Slough Bridge			6		b3	b2	2	e2
Rio Vista Bridge	2	b3	a1	1	b1	b1	*1	e2
Isleton	b1	b1	1	ab2	b2		5	e2
San Joaquin River Delta								
Winter Island	24		87	ab50		45	a10	
Antioch	a15	21	36	63	29	31	7	5
Millers Harbor	b13	b13	27	29	*b27	b18	7	ae4
Webb Pump						b7		
Opposite Central Landing	b3	b4	7	5	b3	ab3	a1	e4
Dutch Slough	b7	b6	a8	6	b6	ab7	6	e8
East Contra Costa I.D.	20		ab10	11				
Victoria	b8		a7	9	b6	b6	7	e6
Mossdale	b7	ab7	a6	ab7	ab7	ab7	a6	a5
DECEMBER - 1946								
San Francisco, San Pablo and Suisun Bays								
Point Orient	b1500	1510	1520	b1440	1330	1470	b1450	
Point San Pedro	b1220	b1440	1280	b1000	b1150	1050	1320	b1130
Point Pinole	b1220		1210		b1110		1220	b1060
Hercules	b1160	b1200	1050		b1060	1090	1000	b1020
Point Davis	b1110	1010	840	b890	b1090	990	930	b970
Grand View	b1230	b1110	960	b940	b1040	910	b890	b870
Crockett	b950	620	880	b770	b910		840	b880
Benicia	b850	b900	*550	b470	b640	750	690	b610
Martinez	b740	b650	490	b410	b490	o420		b590
West Suisun	o600	770	340	*180	360	470	*390	330
Innisfail	b240	b250	120	b138	b156	b160	b180	b180
Port Chicago	o620	630	230	e120	360	b520	b330	b240
Nichols	b400	*b330	240	b210	*280		b340	
O & A Ferry	b124	b121	35	b19	39	71	64	b19
Pittsburg	b8	b24	12	b6	b7	11	16	b7
Sacramento River Delta								
Collinsville		b3	2	3	b3	3	5	b4
3 Mile Slough Bridge	b2	b1	2	b2	b3	ab2		b3
Rio Vista Bridge	*2	b1	*1	b2	b2	2	*2	b1
Isleton	b2	b1	2		b1	5		b1
San Joaquin River Delta								
Winter Island		b14				ab9	a9	a7
Antioch	7	11	7	5	5	6	8	5
Millers Harbor	b5	b7	9	b4	b4	8	7	b5
Webb Pump		b5	a5		b6	6		b6
Opposite Central Landing	b2	b6	a2	b2	b2	5	a3	b4
Dutch Slough	b7	ab8	a8	b7	b7	6	a7	ab6
East Contra Costa I.D.	b9		12	b7	b10	8	a9	b10
Victoria	ab7	b6	*4	b4	b7	6	6	b6
Mossdale	b5	ab5		b3	ab4	ab5	a5	b4

- * No tide given.
(a) Taken at Low High Tide.
(b) Taken on following day.
(c) Taken two days later.
(e) Taken on preceding day.

TABLE 128

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after
high high tide.
Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	JANUARY - 1947							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient			1180	1120	1130	1150	1310	1330
Point San Pedro	1090	1110	1300	1280	1280	1370	1320	1360
Point Pinole	1100	1210		1220		1270		
Hercules	1070	1190	1130	1070	1020	1130		980
Point Davis	1160	1170	1120	1030		910	1020	1030
Grand View	880	870	920	910	940	940	930	970
Crockett	950	1100	960	900	910	950	830	880
Benicia						e550		
Martinez	620	780	530	620	770	720	520	550
West Suisun	450	640	330	480	b620	450	400	420
Innisfail Ferry	166	170	190	190	b190	190	220	
Port Chicago	380	460	330	a450		460	390	480
Nichols	390	290	430	430	270		210	
O & A Ferry	47	170	61	74	86	110	a120	70
Pittsburg	5	27	15	11		24	21	13
Sacramento River Delta								
Collinsville	4	14	a4	9	3	10		4
Three Mile Slough Bridge	2	4		3	2	1	2	2
Rio Vista Bridge	2	2	2	1	1	3	1	1
Isleton		2		1	2	2		
San Joaquin River Delta								
Winter Island	5	16	a11	12	13	11	a10	9
Antioch	6	12	10	9	8	10		13
Millers Harbor	6	7	7	6	6	5	7	5
Webb Pump		7	a5	6	5	a5	a5	5
Opposite Central Landing	3	4	a2	2	3		a1	2
Dutch Slough	10	6	a8		b6	6	a7	5
East Contra Costa I.D.		7	10	ab9	10	9	a10	10
Victoria	a10	6	6	7	7	8	7	7
Clifton Court Ferry*		6	6	7	7	9	7	6
South Fabian**							a10	a8
Mossdale	a6	a5	a6	6	a8	a7	a7	7
FEBRUARY - 1947								
San Francisco, San Pablo and Suisun Bays								
Point Orient	1140	1610	1530	1390	1350	1310	1330	
Point San Pedro	1330	1400	a1270	1210	1080	e1040	1180	
Point Pinole		1280		1140	1010			
Hercules	1140	1220	1180	950	700	740	970	
Point Davis	1030	1150	1110	720		710	940	
Grand View	1030	1000	950	880	890	850	830	
Crockett	960	1070		760	590	570		
Benicia	680	860	660	480	380	390	370	
Martinez	700	620	550	bkn	390		420	
West Suisun	540	310	490	290	150	16	220	
Innisfail Ferry	b170	200	200	200	130		62	
Port Chicago	650	390	320	180	70	a18	a66	
Nichols			370	6			230	
O & A Ferry	78	102	176	19	5	5	24	
Pittsburg	18	26	20	9	5	5	5	
Sacramento River Delta								
Collinsville	12	29	13	3	3			2
Three Mile Slough Bridge	1	2	2	1	1	1	3	
Rio Vista Bridge	2	2	2	1	2	2	2	
Isleton	1		1	1	1			
San Joaquin River Delta								
Winter Island	15	21	16	9	4	5	3	
Antioch	10	14	13	7	5	3		
Millers Harbor	6	8	8		5	4	4	
Webb Pump		a6	5	8	4	5	4	
Opposite Central Landing	5	2	2	1	4	a1	2	
Dutch Slough	6	6	7	7	8	8	6	
East Contra Costa I.D.	11	10	10	10	19	a20	21	
Victoria	7	9	9	9	12	9	10	
Clifton Court Ferry	7	7	9	11		9	8	
South Fabian	8	a9	9	b10	11	10	9	
Grant Line Bridge***		7	12	8	9		ab8	
Mossdale	a6	a7	9	ab12	a9	a9	7	

* New station - established January 3, 1947.

** New station - established January 24, 1947.

*** New station - established February 5, 1947.

(a) Taken at low high tide.

(b) Taken on following day.

(c) Taken on preceding day.

TABLE 128 (CONT'D)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide.
Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	MARCH - 1947							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Point Orient	1340	1130	1140			1290	1400	b1200
Point San Pedro	b1280	1170	a940	710	1220		a1000	
Point Pinole		1030			990			
Hercules	1000	a850	820	710	740		880	940
Point Davis	950	770	760	750	690	780	770	730
Grand View	780	820	790	730	770	820	850	820
Crockett	760	640	660	510	590	730	690	670
Benicia	650	470	330	180	380	370	490	460
Martinez	560	230	120		150	270	380	420
West Suisun	400	240	20	38	220	160	130	190
Innisfail Ferry	66	b76	72	53	92	60	a64	58
Port Chicago	420	70	25	b32	98	185	156	b98
Nichols	220	90	15	4		52		144
O & A Ferry	18	12	a7	3	3	7	18	11
Pittsburg	5	6	a5	6	4	5	a3	4
	Sacramento River Delta							
Collinsville	3	2	2	2	1	2		2
Three Mile Slough Bridge	2				2	1		1
Rio Vista Bridge	2	2	1	1	1	1	1	2
Isleton	1	2	2	1	1		a1	1
	San Joaquin River Delta							
Winter Island	4	6	a4	5	2		4	
Antioch	3	5	4	3	3		3	3
Millers Harbor	3	5	5	6	4		4	a3
Webb Pump	5	6	5	6	5	a5	4	
Opposite Central Landing	4	a2	3	1	2	2	3	3
Dutch Slough	6	7	10	8	7	a6	6	7
East Contra Costa I.D.	14	14	12	12	11	a11	11	11
Victoria	10	10	9	8	9	7	7	8
Clifton Court Ferry			a8	10	7			9
South Fabian	8	b8	7	9	9	a7	a8	abl1
Grant Line Bridge	7	8	9	8	7	7	9	9
Mossdale	7	a8	10	6	a6	a6	9	7
	APRIL - 1947							
	San Francisco, San Pablo and Suisun Bays							
Point Orient	1300	1300	1300		1480	1560	1500	
Point San Pedro								
Point Pinole	1120			a1070	a1220	a1260		a1320
Hercules	a760	760	550	a1020	a1160	1210	1260	a1070
Point Davis	810	580	430	910	970	1150	1150	a1120
Grand View	810	900	860	850	850	990	970	e990
Crockett	650	490	480	890	1040	1030	900	e920
Benicia	460		250		640	810	690	620
Martinez	130	120	170	510	470	580	540	450
West Suisun	160	22	74	146	260	400	480	330
Innisfail Ferry	49	b70	71	ab61	a65	a72	78	a78
Port Chicago	a14	8	a6	162	385	260	310	150
Nichols	30		6	b250	70		240	220
O & A Ferry	2	a4	3	a33	a16	a31	29	a47
Pittsburg	6	a4	3	b10	a5	a14	18	a11
	Sacramento River Delta							
Collinsville	2		3	a3	a1		13	a2
Three Mile Slough Bridge	1	2	1	b2	2	2	1	1
Rio Vista Bridge	1	1	1	b2	1	1	1	1
Isleton	1		b1				abl	1
	San Joaquin River Delta							
Winter Island	4	a5	3	a2		a6	11	a8
Antioch	3	a3	4	3	5	4	6	6
Millers Harbor	3	4	4	b3	4	4	b6	5
Webb Pump			5	a6	a5		3	a4
Opposite Central Landing	3	3	1	a3		1	2	a4
Dutch Slough	7	6	7	7	12	5	5	6
East Contra Costa I.D.	11	a12	14					
Victoria	9	10	b11	b8	9	9	10	12
Clifton Court Ferry	9							8
South Fabian	8		9	b13	a13	15	10	10
Grant Line Bridge	7	7	10	a11	12	7	8	9
Mossdale	a8		11	b13	15	6	8	11

- (a) Taken at low high tide.
(b) Taken on following day.
(c) Taken on preceding day.

TABLE 128 (CONT'D)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide.

Salinity expressed in parts of chlorine per 100,000 parts of water.

Stations	MAY - 1947							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Point Orient	1580	1440	1480	1470		1650	1640	e1610
Point Pinole	1330		1320	1320				
Hercules	1170	1240	1110	1200	1360	1340	1340	e1350
Point Davis		1180	880	1140	1120	1340	1250	e1350
Grand View	1060	1100	1110	1180	1130	1130	1170	e1220
Crockett	a1000	1200	700	910	1140	1380	1220	e1240
Benicia	810		520	720	e920			980
Martinez		770	490	a520	690	860	780	810
West Suisun	350	520	430	b340	620	1000	600	640
Innisfail Ferry	a76	b90	b92	a90		b250	a270	a250
Port Chicago	450	a290	a170	210	a520	800	590	740
Nichols		130	240	b60		550	550	
O & A Ferry	a60	a69	33	ab30	a95	a196	150	a170
Pittsburg	a20	a21	15	bkn	a30	a70	a112	a70
	Sacramento River Delta							
Collinsville	a3	a3	13	a6		108	a109	a56
Three Mile Slough Bridge	1	8	2	2	2		b3	3
Rio Vista Bridge	1	1	1	2		3	b2	3
Isleton	2	a2	1	b2	a1	1		2
	San Joaquin River Delta							
Winter Island	a11	a12	11	a7		a72	a78	a48
Antioch	8	12	9	b7	13	73	49	35
Millers Harbor	a6	8	5	b5	7	37	b19	20
Webb Pump	a4	a4		4		3	a6	
Opposite Central Landing	a2	5	3	a3	a3	4	a4	a4
Dutch Slough	a6	4	4	a5	a4	4	a6	
East Contra Costa I. D.	11	10	9	5	5	5	a7	a8
Victoria	10	10	8	b6	6	8	ab8	
South Fabian	a12	12	5	b7	8	10	b7	6
Grant Line Bridge		4	6	b7	9	9	4	6
Mossdale	11	3	3	b8	8	6	a4	5
	JUNE - 1947							
	San Francisco, San Pablo and Suisun Bays							
Point Orient	1620	1640	1500	1650	1720	1680		e1750
Point Pinole				a1470				a1550
Hercules	1370	1360	1220	1260	1390	1410	1530	e1480
Point Davis	1280	1340	1090	1250	1420	1390	1390	1420
Grand View	b1130	1260	1300	1280	1300	1320	1370	1330
Crockett	a1090	1080		1210	1180	1310	1410	1430
Benicia	970		740	1040	1130	1030	1080	1140
Martinez	810	870	600	770	a710	1110	1150	1050
West Suisun	730	650	390	b720	930	850	720	930
Innisfail Ferry	a250		a160	b230	a270	330	ab350	
Port Chicago	bkn	b550	430	660	a530	860	880	920
Nichols		230	340	b570	710	390	800	620
O & A Ferry	a250	a120	120	a90	a210	370	bkn	a340
Pittsburg	a52	a37	a39	48	a57	a84	a200	a178
	Sacramento River Delta							
Collinsville	a72		a42	a15		202	a194	a230
Three Mile Slough Bridge	4	3	6		3	5	b10	14
Rio Vista Bridge	2	3	b2	b1	2	3	b3	3
Isleton	3		b2		a2	4		2
	San Joaquin River Delta							
Winter Island	a38	ab40	a32	a30	a48	122	154	a136
Antioch	47	46	a22		87	101	130	164
Millers Harbor	31	27	b14	b16	33	62	b72	108
Webb Pump	a6	6	a6	a5	a6			a9
Opposite Central Landing	a3	5		a5	a3	5	a6	a5
Dutch Slough	a7	6	a6	a6	a6	7	a9	bkn
East Contra Costa I. D.	7	6	a7	b7	a9	8	bkn	9
Victoria	b7	6	ab7	b7	8	8	b7	8
South Fabian	7	7	a11	b13	13	14		13
Grant Line Bridge	8	b11		11	14		16	
Mossdale	7	10	a10	b12	15	17	a16	15

- (a) Taken at low high tide.
 (b) Taken on following day.
 (e) Taken on preceding day.

TABLE 128 (CONT'D)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide.
Salinity expressed in parts of chlorine per 100,000 parts of water.

Stations	JULY - 1947							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	b1740	1760	1700	1760	1780	1770	1780	1840
Point Pinole	a1540			a1590	a1580			a1660
Hercules	b1460	1520	1490	1540	a1580		e1640	b1610
Point Davis	b1410	1460	1410	1500	1570	1490	1570	b1570
Grand View	1400	1470		1490	1530	1570	1560	e1610
Crockett	b1400		1380	1460	1560	1480	1520	
Benicia	b1220	1150	1190	1330	1350	1210	1310	
Martinez	a1160	b1150	980	1180	1120	a1110	1200	b1300
West Suisun	1080	920	800	b1090	1190	840	990	1220
Innisfall Ferry	a430		ab450	a470	520	630	a620	650
Port Chicago	b930	980	890	1100	b1180	e1140	1070	b1180
Nichols			620	900		890		
O & A Ferry	a370	450	a430	a440	a470	a680	a470	a580
Pittsburg	a220	a280	320	a310	a330	310	a390	a450
Sacramento River Delta								
Collinsville	a210		a270	a280	a330	a370	a340	a400
Emmaton **			e20			b70		
Three Mile Slough Bridge		27		26	70	56	55	77
Rio Vista Bridge	b4	r4	5	2	7	4	b4	b6
Isleton	b3		a4	a2	a4			a2
San Joaquin River Delta								
Winter Island	a170	270		a260			a270	a320
Antioch	226	240	220	a160	360	300	330	400
Millers Harbor	b140	r60	130	a126	230		240	b170
Jersey			a32	a25	a31	a102		59
Webb Pump	a7	9	a9	a11	26	a24	a20	a26
Opposite Central Landing	a5	5	a7	a6	a7	a11	a9	a10
Dutch Slough	a13	16	bkn	a19	27	a27	a31	a41
East Contra Costa I. D.	b10	9	a9	7	8	a8	a9	
Victoria	b7	7	a9	8	7		bkn	b7
Clifton Court Ferry		a10			9	b9		b9
South Fabian	b13	5	ab17		13		13	b11
Grant Line Bridge	b16			16	14	15	a16	15
Mossdale	b15	6	a14	17	16	a18	a16	b15
Below Banta Carbona I. D.*				15	17	a17	ae18	15
At Vernalis*				15	16	a16	ae16	a16
AUGUST - 1947								
San Francisco, San Pablo and Suisun Bays								
Point Orient	1810	1830	1860	1860	1840		1850	1790
Point Pinole					1640			
Hercules	a1670	a1700	1660	b1620	1700	a1670		1610
Point Davis	1610	1600	1630	b1670	1610	1650	1560	1620
Grand View	1630	1640	1640	b1670	a1680	1630	1630	1660
Crockett	1560	a1600	1620	b1630	af1600	1540	1590	a1470
Benicia	1430	1320		b1430			1430	1360
Martinez		1240	1200	b1340		1150	1320	1140
West Suisun	1160	1110	1250	1350	1100	1010	b1180	1060
Innisfall Ferry	ab670	670	750	730	a780	820	a750	
Port Chicago	1190	920	1090	1240	1210	1040	960	1060
Nichols		e940	740	b1160	1100	1030	1050	
O & A Ferry	a590	560	a530	a610	a610	a530	a580	a560
Pittsburg	a390	r500	420	a420	a490	470	a370	ab350
Sacramento River Delta								
Collinsville	a400	450	a280	a390	a450	a360	a350	r380
Three Mile Slough Bridge	a70	86	99	e125	104	90	b82	78
Rio Vista Bridge	5	r5	21	b14	6	13	b7	7
Isleton		2		b4	4	3	3	
San Joaquin River Delta								
Winter Island	a350	340	b380	470	370	a330	a350	a350
Antioch		310	210	a160	350		b380	
Millers Harbor	e150		a60	a70	b168	270	b300	170
Jersey		102	a32	a41	45	a79		
Webb Pump	32	39	a9	a14	20	a12	a40	a39
Opposite Central Landing	a11	15	a39	a55	a84	a57	a14	a13
Dutch Slough	50	46	a7	ab12	10	a11	ab56	a55
East Contra Costa I. D.	b9	8	af11	b10	11	b13	b13	14
Victoria	9	9		b10		a10	b14	16
Clifton Court Ferry		8		b11	11		ab10	12
South Fabian		12		13	15		b14	b19
Grant Line Bridge	12	14			17	b16		r15
Mossdale	18	16	a15					15
Below Banta Carbona I. D.		16	b15					
At Vernalis		5	b14					

* New Station - established July 3, 1947
 ** New Station - established July 10, 1947
 (a) Taken at low high tide.
 (b) Taken on the following day.
 (c) Taken two days later.
 (e) Taken on preceding day.
 (f) Taken two days earlier.

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide.
Salinity expressed in parts of chlorine per 100,000 parts of water.

Stations	SEPTEMBER - 1947							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Point Orient	1810	1800	1810	1870	1840	1880	e1720	1750
Point Pinole	a1680		a1650					
Hercules	1600				1670		1560	
Point Davis	1520	1560	1650	1560	1490	1500	b1480	1430
Grand View	1680	b1710	1710	1700	1800	1700	b1720	1720
Crockett	a1520	1790	1520		1500	1320	b1260	1440
Benicia	1350	1300	1430	1510	1250	1300	b1140	1130
Martinez		1240						
West Suisun	a990	1060	1260	1200	1100	1100	980	760
Innisfail Ferry	a740	a740	a750	a750	a740	a710	ab700	
Port Chicago	1060	1210	1210	1100	1020	940	860	810
Nichols		1020	1080		880			750
O & A Ferry	a540	a550	560	520	bkn	a400	350	370
Pittsburg	a390	460	a290	a350	340	240	a160	210
	Sacramento River Delta							
Collinsville	a320	a330	a280	a310	280	370	a136	180
Three Mile Slough Bridge	78	71		a48	37	31	b16	
Rio Vista Bridge	17	f5	b26	9	3	3	b3	5
Isleton	5	a3				4		3
	San Joaquin River Delta							
Winter Island	350	a320		310	300			170
Antioch	300	340	360	350	140	230	160	140
Millers Harbor	a220	f230	b270	260		170	110	100
Jersey	ae86	e124	ab84			63	34	49
Webb Pump	40	35	a34	39	37	a20		22
Opposite Central Landing	19	a11	a12	a13	17	10	a5	10
Dutch Slough	62	53	a51	55	50	a41	a36	37
East Contra Costa I. D.	14	a13	b17	16	19	16	a16	15
Victoria	14	15	b16	19	ab15	b12	b14	9
Clifton Court Ferry	a12	a14	a14	16	13	a11	10	a10
South Fabian				16		a12	b9	
Grant Line Bridge	b17	ac12	c12	c13		c11		a10
Mossdale	b17	a12	b10	11	a9	a8	b7	a7
Below Banta Carocca I. D.	15							
	OCTOBER - 1947							
	San Francisco, San Pablo and Suisun Bays							
Point Orient	1780	1760	1740	1820	1640	1580	1620	bkn
Point Pinole	1590		1490	1530		1350	1270	1430
Hercules				1430			e1240	
Point Davis	1420	1520	1360	1310	1230	960		1270
Grand View	1640		1610	1660	1570	1570	1490	1440
Crockett	1390	1510		1340	1070	a960	1200	1260
Benicia	1080	1270		1090	910	740	1030	
Martinez		1240	b1010	1030	780	a610		800
West Suisun	730	a1090	e740	660	640	b670	810	870
Innisfail Ferry	b600	560	ab580	b520	490	450	b410	
Port Chicago	810	990	810	750	730	550	680	b740
Nichols	390	860	c590	700	550			
O & A Ferry	340	a350	a360	280	270	140	180	230
Pittsburg	180	270	a170	150	100	50	44	49
	Sacramento River Delta							
Collinsville	180	a150		132	a80	34	36	93
Three Mile Slough Bridge			bkn	8	3	4	4	6
Rio Vista Bridge	3	f2	b6	3	2	1	3	3
Isleton	4	3				1	3	2
	San Joaquin River Delta							
Winter Island			a128	110	42		38	
Antioch	bkn	190	144	94	70	29	24	36
Millers Harbor	90	f94	90	60	48	22	18	26
Jersey	a33	24			14			
Webb Pump	25		a18	bkn	4	12		10
Opposite Central Landing	10	a8	a6	8	3	12	5	a4
Dutch Slough	35	a26	a27	22	a20	22	16	a17
East Contra Costa I. D.	a15	a16	a15	19	a18	16	23	16
Victoria	11	10	b11	9		9	12	
Clifton Court Ferry	a10	a10						
South Fabian	a11		b11		a10	12	ab8	a11
Mossdale	a8	a9	b9	a9	c10	f12	c11	
Grant Line Bridge	ac9		c9					

- (a) Taken at low high tide.
 (b) Taken on following day.
 (c) Taken two days later.
 (e) Taken on preceding day.
 (f) Taken two days earlier.

TABLE 128 (CONT'D)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide.
Salinity expressed in parts of chlorine per 100,000 parts of water.

Stations	NOVEMBER - 1947							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Point Orient	1610	bkn	1650		1540		1470	1700
Point Pinole		a1220	1300	1410				
Hercules			1180			a1250	1360	a1180
Point Davis	1150		1230	1090	1150	1170	1340	1290
Grand View	1440	1470	1430		1400		1310	1340
Crockett		910	1160	1060	850	1030	1280	1210
Benicia		710	850	950	740	780	990	
Martinez	730	460		a580	660	680		910
West Suisun	740	370	560	510	460	680	790	840
Innisfail Ferry	390	b380	280	270	b320	b340	340	370
Port Chicago	600	410	590	710	a460	660	740	b700
O & A Ferry	170	a60	90	150	a80	140	190	230
Pittsburg	55	18	16	34	a24	26	28	157
	Sacramento River Delta							
Collinsville	a28	a15	15	29	a12	17	31	108
Three Mile Slough Bridge	4	5	2	4	3		4	6
Rio Vista Bridge		f3	1	1	11	5	2	1
Isleton	2				2			
	San Joaquin River Delta							
Winter Island	43	a20	21	25		17		79
Antioch	31	13	12	18	18	14	20	74
Millers Harbor	c15		10	12	11	8	11	31
Webb Pump	12		8	9		9	11	a8
Opposite Central Landing		a4	5	a5		3	4	
Dutch Slough	a15	a17	10	11		10	9	11
East Contra Costa I. D.	ab12	a12	15	17	a14	13	18	11
Victoria		b11	12	8	8	8	13	10
Clifton Court Ferry					7	9		
South Fabian			a9	a8			a9	
Mossdale	a8	a8	a7	a9	a7	6	a10	a10
Grant Line Bridge	ab10			10	a9		c10	
	DECEMBER - 1947							
	San Francisco, San Pablo and Suisun Bays							
Point Orient	1830	1640	1600	1610	1640	1570	1660	1700
Point Pinole			1410					1390
Hercules		1360						
Point Davis	1200	1240	1240	1140	1290	1230	a1340	1300
Grand View	a1250	1410	1270	1290	1260	1170	1090	1080
Crockett	1150	1250	990	1060	1090	1130	1280	1230
Benicia	890	940	1060	1050	750	800	1090	
Martinez	890		850	920	650		920	890
West Suisun	640	650	520	820	b500	880	b870	710
Innisfail Ferry	360	370	b340	b350	360	350	400	440
Port Chicago	e700	690	b680	850	440	800	850	e750
O & A Ferry	260	bkn	170	230	200	240	290	320
Pittsburg	a49	105	80	100	52	57	130	a80
	Sacramento River Delta							
Collinsville	a56	48	62	55	46	67		a71
Three Mile Slough Bridge	3	3	4	2	3			
Rio Vista Bridge	4	f1	2	3	1	3	2	2
Isleton	1			3		1		
	San Joaquin River Delta							
Winter Island	a47	ab59	62	a44				ab74
Antioch	49	36	35	53	a29	56	74	94
Millers Harbor	24	b19	22	26	a17			
Webb Pump	a9	8						a10
Opposite Central Landing	5	6	5	a2	a3	6	5	a3
Dutch Slough	a9	7	9	9	8	10	9	a11
East Contra Costa I. D.	12	11	18	a13	a12	14	12	12
Victoria		8	5	11	9	9	12	10
Clifton Court Ferry	10	9	16		10	9	8	
South Fabian		12					ab9	
Mossdale	a12	9	a10	a8	8	7	a10	a10
Grant Line Bridge	a11	10		a10	10	7	ac9	

- (a) Taken at low high tide.
 (b) Taken on following day.
 (c) Taken two days later.
 (e) Taken one day earlier.
 (f) Taken two days earlier.

TABLE 142

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide.

Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	JANUARY - 1948							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1650	a1670	1480	1330	1300	1500	1560	a1490
Point Pinole		1410		960		1210	1280	
Hercules	1390	1250	a980		940			
Point Davis				690	840	1090	1170	1150
Grand View	1130	1140	1120	1080	1070	890	940	960
Crockett	1280	1160	730	610	750	980	1120	1010
Benicia		990	590	370	b620	820	860	560
Martinez	830	750	290	230	520	690		550
West Suisun		b410	190	230	152	170	460	310
Innisfail Ferry	420	390	b110	ab90	116	b170	210	220
Port Chicago	720	660	150	128	a100	600		380
Nichols			90		190	b170	440	
O & A Ferry	260	150	20	6	32	92	150	98
Pittsburg	a114	43	8	5	3	7	23	21
Sacramento River Delta								
Collinsville		32	3	a1	2		50	15
Rio Vista Bridge	1	1	2	3	1	2	1	2
Isleton Bridge	1	1	3				2	1
San Joaquin River Delta								
Winter Island		13	11	c5	4	6	28	19
Antioch	62	29	7	7	5	6	13	15
Millers Harbor	31	16	6	4	4	4	12	7
Webb Pump	6	5	a6	a5	4	5	a7	6
Opposite Central Landing	2	4		a2	1	4	4	a3
Dutch Slough	9	7	a7	a9	a7	10	6	8
East Contra Costa I. D.	11	12	a13	a16	15	5	abl4	16
Victoria	13	12	12	14	13	13	12	12
Clifton Court Ferry	12	9	11	11	15	11	13	10
South Fabian		a12	a13			abl3	a13	
Grant Line Bridge	8	10	10	a10	a10	12	9	11
Mossdale	11	a12	a10	a11	13	a12	a7	9
FEBRUARY - 1948								
San Francisco, San Pablo and Suisun Bays								
Point Orient	1550	b1420	1440		1440	1530	1570	
Point Pinole					1230		1290	
Hercules	1150	1210						
Point Davis	990	1150	1020	1050	1140	1080	1120	
Grand View	920	990	970	990	970	950	1050	
Crockett	990		940	870	970	1170	1150	
Benicia	680	730	730		870		740	
Martinez	680	730	640	510	680	a520	550	
West Suisun	410	570	400	260	b550	520	370	
Innisfail Ferry	220	210	230	320	200	210	210	
Port Chicago	520	400	350	a370	680	320	ac330	
Nichols		340	200	260		500		
O & A Ferry	108	150	45	a46	94	156	140	
Pittsburg	23	33	24	12	37	55	30	
Sacramento River Delta								
Collinsville	20	31	10	5	25	44	a14	
Three Mile Slough Bridge				2		5	4	
Rio Vista Bridge	1	b6	2	1	3	1	1	
Isleton Bridge	1		2		1	5		
San Joaquin River Delta								
Winter Island	19	34	5	11	24	23	24	
Antioch	11	27	11	9	9	18	18	
Millers Harbor	7	10	8	8	ab7	12	a9	
Webb Pump		4	a8	6	4	6	6	
Opposite Central Landing	2	4	a2	a4	4		a4	
Dutch Slough	b10	6	a6	7	6	7	a6	
East Contra Costa I. D.	13	13	a14	13	14	15	16	
Victoria	11	14		15		19	b16	
Clifton Court Ferry	12	13	12	15	16	19	23	
South Fabian		a12		15		a22		
Grant Line Bridge	b12		a15	a19	20		c22	
Mossdale	11	a14	a20	19	20	a21	a22	
At Vernalis	12	17		23	19	17	24	

- (a) Taken at Low High Tide.
 (b) Taken on following day.
 (c) Taken two days later.
 (e) Taken one day earlier.
 (*) Presumed.

TABLE 142 (CONT'D)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide.
Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	MARCH - 1948							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1480		1510	1550	1510	1510	1510	1230
Point Pinole			1320			1280	a1100	
Hercules				ab1290				
Point Davis	1090	1120	1000	1220	a1110	a1010	910	a580
Grand View	a1050	1130	1120	b1130	1120	1210	1080	1100
Crockett	a740		1110	1060	a960		a600	a600
Benicia	880	730	740	750	770		560	
Martinez	630	620	610	bkn	730	550	430	340
West Suisun	710	660	530	510	550	310	160	74
Innisfail Ferry	210	180	b210	210	260	160	ab190	110
Port Chicago	a290	610	600	680	480	400	190	126
O & A Ferry	94	112	116	a110	144	a42	a32	4
Pittsburg	26	25		a41	34	14	12	4
Sacramento River Delta								
Collinsville	11	12	15	27	25		a2	2
Three Mile Slough	2	2		a1			2	1
Rio Vista Bridge	1	1	1	4	1	1	1	6
Isleton			3	1	1			
San Joaquin River Delta								
Winter Island	26		24	36	34	12	11	5
Antioch	14	14	13	22	19	10	10	4
Millers Harbor	8	9	9	15		14	6	4
Webb Pump	4	5	a7	4	4	6	6	5
Opposite Central Landing	5	4	3	3	4	4	1	1
Dutch Slough	7	a7	7	6	bkn	6	7	7
East Contra Costa I. D.	15	17	ab15	b18	16	19	18	21
Victoria	15	17	17		25	17	20	20
Clifton Court Ferry	17	bkn	18	19	19	21		18
South Fabian	22	a22	a15	26	24	24	20	21
Grant Line Bridge	b22		20	21	21	21	18	14
Mossdale	16	a25	a21	20	17	18	18	14
At Vernalis	17					18		14
APRIL - 1948								
San Francisco, San Pablo and Suisun Bays								
Point Orient	1290	1230	1200	1090	1060	1160	1050	720
Point Pinole	1220	870				a630		
Hercules	ab720							
Point Davis	650	790	710	560	a350	d390	220	350
Grand View	1100	830	a800	810	780	710	710	600
Crockett	450	600	550	a260	390	340	160	220
Benicia	280	320		170	150	200	150	60
Martinez	340	a130	220	100	11	a7	8	99
West Suisun	160	b30	22	22	e56	9	7	12
Innisfail Ferry	98	a116	a110	84	b94	a70	54	35
Port Chicago	36	46	36	6	4	5	3	3
Nichols				4	4	3	6	
O & A Ferry	4	a4	a7	4	2	a2	1	2
Pittsburg	4	a3	a4	4	1	a3	a4	3
Sacramento River Delta								
Collinsville	2	a2		2			1	2
Three Mile Slough		1	3	a1	1	5	1	1
Rio Vista Bridge	1	3	1	1	4	1	1	2
Isleton	1	1		a1	a1		1	1
San Joaquin River Delta								
Winter Island	4	3	5	4	4	a2		5
Antioch	5	4		3	5	5		3
Millers Harbor	2	6	3	4	b3	a4	3	3
Webb Pump	4	a6	a6	4	8	a3	3	4
Opposite Central Landing	3	a2	a1	bkn	2	a1	a1	5
Dutch Slough	8	a7	9	7	7	8	6	6
East Contra Costa I. D.	23	32	29	29	23	22	20	9
Victoria	20	19	17	17	17	18	5	8
Clifton Court Ferry	9	17	17	17	bkn	14	8	
South Fabian	21	a19	b19	19	18	14		
Grant Line Bridge	b13		17	14	a8	10	4	
Mossdale	15	7	13	11	9	7	2	5
At Vernalis	o16	17	a14	10	e7	13	4	e4

(a) Taken at Low High Tide
(b) Taken on following day.
(c) Taken two days later.

(d) Over 1 hour off scheduled time.
(e) Taken one day earlier.
(*) Presumed.

TABLE 142 (CONT'D)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after
high high tide.

Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	MAY - 1948							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	e670	e1100	970	750	e1130	1320	1150	790
Point Pinole		a920			a710			
Hercules			330	400		440		450
Point Davis	310		290	400	b500	660		450
Grand View	560	500	580	640	b620	660	710	740
Crockett		330	270		137	410	440	
Benicia	196	280	190	70	240	290	130	
Martinez	a38	a9	a6	a30	8	88	87	310
West Suisun	b8	35	12	12	c19	12	7	112
Innisfail Ferry	25	a19	a17	a18	a18	abl7	16	16
Port Chicago	4	2	4	3	e4	9	5	100
O & A Ferry	a1	a1	a3	a2	a6	a3	3	bkn
Pittsburg	a2	a2	a3	a2	a1	a3	a2	a2
Sacramento River Delta								
Collinsville	a1				a2	a2	a1	
Three Mile Slough	1	1	1	1	b1	1	2	b1
Rio Vista Bridge	2	1	5	1	b1	2	4	b2
Isleton				b2	b1		2	a3
San Joaquin River Delta								
Winter Island	bkn	a2	6		a2	a2	2	a3
Antioch	a3	a6	a2	a2	a3	a2	a6	a2
Millers Harbor	3	1	6	2	b11	3	5	b2
Webb Pump	a4	a5	a7	a5	a9	a3	2	a3
Opposite Central Landing	a1	a1	a2	a2	a1			a2
Dutch Slough	a9	a8	7	a9	a6	7	1	a5
East Contra Costa I. D.	a3	6	b5	a3	a4	a3	5	b4
Victoria	5	7	2	b2	b3	3	3	b2
Clifton Court Ferry			4			1		a1
South Fabian	4		b3		b3	b8		a2
Grant Line Bridge		2	1	4	2	1	1	
Mossdale	3	3	2	a4	b2	1	3	b2
At Vernalis	bd6		b5	5	2		b5	
JUNE - 1948								
San Francisco, San Pablo and Suisun Bays								
Point Orient	1060	e1140	1140	1040	e1100	1360		1400
Point Pinole	a820				a650			
Hercules						280	880	
Point Davis	e510	510	520	500	e510	580	630	840
Grand View	700	610	640	bkn	e700	680	720	660
Crockett		190	410	a180	e460	250	480	730
Benicia	500	e200	e150	180	11	e204	e320	
Martinez	170		270	60	71	148	218	440
West Suisun	e350	e60	8	34	31	48	12	300
Innisfail Ferry	a18	a19	17	21	19	abl7	13	18
Port Chicago	b80	30	6	5	b80	e102	62	380
O & A Ferry	a3	a3	a3	a4	a4	a3	5	a4
Pittsburg	a3	a3	a2	ab2	a3	a3	1	a4
Sacramento River Delta								
Collinsville		a1			a1	a1		a2
Three Mile Slough	b5	2	1		2	2	2	
Rio Vista Bridge	b1	2	1	b1	1	1	1	a2
Isleton	a1	2						a3
San Joaquin River Delta								
Winter Island	a3	a2	3	a1	a2	1	1	a2
Antioch	a3	a2	2	a4	a2	a2	a2	a1
Millers Harbor	b2		2	b4	1	a1	3	2
Webb Pump	a4	a3	2	a3	a4	3	1	a1
Opposite Central Landing	a2				a6	2	1	a2
Dutch Slough	a4	a4	3	a3	a3	2	1	a2
East Contra Costa I. D.	a5	4	2	a4	bkn	2	2	
Victoria	b1	3	2	b2	a2	3	3	
Clifton Court Ferry	a2	a4				2	2	
South Fabian				a6	2	2	2	
Grant Line Bridge				2	1	2	2	
Mossdale	a1	2	1	a2	2	3	1	a5
At Vernalis		c2	3		e2	e2	2	e3

- (a) Taken at Low High Tide.
 (b) Taken on following day.
 (c) Taken two days later.
 (d) Taken 1 hour off scheduled time.
 (e) Taken one day earlier

TABLE 142 (CONT'D)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours after high high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	JULY - 1948							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1090	1270	1340	1410	1600	1500	1570	1530
Point Pinole	1170			11190				1380
Hercules		a950	a1130					
Point Davis			860	1010	1250	1100	1180	1210
Grand View	e700	710	830	870	880	910	a910	a960
Crockett	620	a760	a940	a960	1150		980	
Benicia	420	e520	640		e990	840		ab1080
Martinez		e580	550	500	710	800		890
West Suisun	e260	340	250	330	550	580	620	700
Innisfall Ferry		a21	30	a35	a46	21	a86	a98
Port Chicago	320	400	b360	420	700	630	490	710
O & A Ferry	14	a30	42	a40	a90	a150	180	a108
Pittsburg	2	a11	a15	ab24	a32	a56	59	a60
Nichols			270					
Sacramento River Delta								
Collinsville	a4	a2	6		a26		a47	a60
Three Mile Slough	1	2	a2	3	4		2	b4
Rio Vista Bridge	2	1	2	e1	a2		b2	b3
Isleton			2			6		
						4		
Mokelumne River Delta								
Terminus**			3	3	2	a3	6	4
Southwest Point**				a1	1	2	a2	a2
San Joaquin River Delta								
Winter Island			10	a18	40	58	a38	a45
Antioch	3	5	7	a6	a11	22	29	a22
Millers Harbor	bkn	a4	a3	ab5	8	29	16	
Webb Pump	1	2	2					
Opposite Central Landing	1	3	3	a2	a3	2	a3	a3
Dutch Slough	1	2	3	a2	2	4	a4	a5
East Contra Costa I. D.	1	2	3	a6	4	5	a26	a7
Victoria	2	4	3	b5	4	5	b14	b4
Clifton Court Ferry	3	3	5	b6	6	10		b10
South Fabian	ab3				8			
Grant Line Bridge		5	4		10	12		
Mossdale	a5	4	e9	b10	11	13	a2	ab15
At Vernalis	e4	5		e10	e10	e11		
		5						
		5						
AUGUST - 1948								
San Francisco, San Pablo and Suisun Bays								
Point Orient	1730	a1600	a1190	bkn	1530	1550	1620	1720
Point Pinole			1180	a1140	a1340		a1170	a1350
Hercules		a1350	a1270	a1390	1250			
Point Davis	a1420	1340		1150	1090	1220	1200	1330
Grand View	1010	1060		1320	1310	1250	1260	1260
Crockett	a1170	1300				1220	1240	a1280
Benicia	a1130	f1000	1050	a1320	1310	1250	1240	a1280
Martinez	1020	e780	1050		960	890	1080	1060
West Suisun	840	e780	f800		950	900	760	1260
Innisfall Ferry	a133	700	580	b840	780	650	950	e850
Port Chicago	a133	240	240	a440	740	310	370	a280
Nichols	750	730	760	740	ab370	620	640	760
O & A Ferry	a210	a230	590	660	690	500	630	740
Pittsburg	a78	140	a160	a240	a220	a210	a220	a190
			a104	a170	a170	a83	110	a110
Sacramento River Delta								
Collinsville		96	a179	a101	ac108	b72	86	a50
Three Mile Slough	3	a5	b6	5		5	10	
Rio Vista Bridge	2	4	b3	4		2	1	
Isleton		5	b2		a2			3
								a3
Mokelumne River Delta								
Terminus	4	2	b4	4	5	a4	2	3
Southwest Point	3	3	a2		3	4	a2	a3
San Joaquin River Delta								
Winter Island	96	127	a79	a78	97	102	96	
Antioch	a29	57	66	a80	a80	90	80	a50
Millers Harbor	a23		26	a33	35	44	37	30
Opposite Central Landing	a3	4	a4	a4	3	6	a3	a2
Dutch Slough	a6	6	a6	a6	9	7	a9	a8
East Contra Costa I. D.	b5	a4	a4	b14	5	7	a8	ab9
Victoria	4			3	5	10	a7	11
Stockton Country Club**						10		a10
Clifton Court Ferry			a10	9		9	a11	17
Garwood Bridge**	9	9				2	b10	11
Williams Bridge**						5	b6	1
South Fabian								
Grant Line Bridge				a9	17	13		
Mossdale	e14	14	a12	16	14	16	9	12
At Vernalis	a9	15	b13	15	e13			b11

(a) Taken at Low High Tide.
 (b) Taken on following day.
 (c) Taken two days later.
 (d) Taken on preceding day.
 (e) Taken two days earlier.

(**) Stations reestablished 7/9/48.
 (***) Stations reestablished 8/19/48.

TABLE 142 (CONT'D)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours after high tide.
 Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	SEPTEMBER - 1948							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	b1720	1700	1630	e1750	1490		1680	1690
Point Pinole	a1460		a1430	a1400				
Point Davis	1370			e1270				
Grand View	1220	1290	1270	1260	1300		b1330	b1310
Crockett	a1210	1330	1070	a1040	1240	1220	b1060	
Benicia	1060	e990	1090	810		1040	730	830
Martinez		710	820		720	780	690	b620
West Suisun	920	790	690	b750	530	590	690	700
Innisfail Ferry	a310	340	a350	280		360	a310	a280
Port Chicago	610	710	650	b680	650	600	490	b580
Nichols	630	530	570	550	490	470	e430	470
O & A Ferry	a180	270	a250	a180	190	200	a120	a120
Pittsburg	a80	100	a90	a70	90	a60	60	a50
Sacramento River Delta								
Collinsville	a76	130		a140	66	46	28	a28
Three Mile Slough	6	4	7	a4	4		2	
Rio Vista Bridge	2	2	5	4	3	2		4
Isleton						2		2
Hokelumne River Delta								
Terminus	a4	5	3	4	7	5	11	6
Southwest Point	2	a3	a3	a3	a2	a3		a6
San Joaquin River Delta								
Winter Island	a67	100		a57	54	59	41	a30
Antioch	a40	80	90	a150	70	b70	a20	a22
Millers Harbor	32	37	33	32	24		19	17
Opposite Central Landing	3	4	a4		4	5		4
Dutch Slough	9	9	a9	a8	a8	a7	a7	a8
East Contra Costa I. D.	a12	10	a12	11	17	a13	a15	16
Victoria	7	12	b9	11	13	14	b15	20
Stockton Country Club	12			a12	a9	a3	a13	
Clifton Court Ferry	13		a13	14	a13			13
Garwood Bridge	13	12	a12	a13	a11	a13	a11	a12
Williams Bridge	7	7		9	11	13	12	11
Grant Line Bridge	e13			12	13			8
Mossdale	11	bkm	a13	15	a14	a11	10	8
At Vernalis		e12		e11			b8	
OCTOBER - 1948								
San Francisco, San Pablo and Suisun Bays								
Point Orient	1550	1340	1380	e1330	1550	1570	1570	
Point Pinole				1350	1400		a1250	
Grand View	1330	bkm	1310	1270	1220	1240	1270	1150
Crockett	1170	1180	1040	1110	1240	980		
Benicia	920	e540	940	1000	1000	900	b790	
Martinez			800	680	740	610		
West Suisun	b460	440	730	730	810	430	470	760
Innisfail Ferry	270	260	a250	250	260	a270	a270	250
Port Chicago	550	640	530	b550	540	b450	b590	540
Nichols		440				530	450	
O & A Ferry	150	130	a130	120	200	a120	a80	a180
Pittsburg	40	50	60	60	40	44	20	30
Sacramento River Delta								
Collinsville	b28	58	a22	34	28	40	a18	42
Three Mile Slough		4	3	4	7	4	6	3
Rio Vista Bridge	6	3	b3	4	3	2	ab5	4
Isleton	3	5	b3	4	3	5	b2	2
Hokelumne River Delta								
Terminus	5	6	4	a5	a6	4	6	a6
Southwest Point		a2	a3		a2			
San Joaquin River Delta								
Winter Island	49		a38	15	22	40	36	27
Antioch	21	19	a14	a16	17	21	a14	12
Millers Harbor	16	16		10				
Opposite Central Landing	5		a4	3	4			
Dutch Slough	7	8	a9	7		7	a8	7
Orwood Bridge**						12	b11	10
East Contra Costa I. D.	a14	a18	a17	14	14	a16	b16	15
Victoria	a14		b10	9	11	10	a11	12
Stockton Country Club	12	a12		a9		a26		11
Clifton Court Ferry	a10	10	a8	9	10	10	10	
Garwood Bridge	a9	a7	b8	9	a9	a10	b17	
Williams Bridge	8		a10	9	8	11	ab11	9
South Fabian				a11				
Grant Line Bridge	a08				a9	a12		10
Mossdale	6	a8	a9	a8	a8	a11	a11	a11
At Vernalis	8							

(a) Taken at Low High Tide
 (b) Taken on following day.
 (c) Taken two days later.
 (e) Taken on preceding day.
 (**) Station reestablished 10/21/48

TABLE 142 (CONT'D)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide.
Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	NOVEMBER - 1948							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1720	1380	1630	1570	1550	1550	1640	1740
Point Pinole	1340		1270		1340	a1260	1360	1420
Point Davis	1240	960		1200	1150			1000
Grand View	1200	1210	1240	1230	1140	1200	1150	1150
Crockett	1210	1050	940	*1230	1050	1050	1170	1150
Benicia	930	e680	950	1060	870	660	890	1000
Martinez	600	630	a620	800	760		a680	750
West Suisun	460	490	710	950	480	440	710	780
Innisfail Ferry	270	a330	b270	b270	310	ab280	b290	b250
Port Chicago		380	440	620	720		430	a420
Nichols					a240	b380	460	
O & A Ferry	170	a100	150	190	180	a120	100	180
Pittsburg	100	ab30	a15	31	36	44	42	32
Sacramento River Delta								
Collinsville	72	22		74	b110	a8		31
Three Mile Slough	4		7	2		8		3
Rio Vista Bridge	4	2	2	3		4	ab5	3
Isleton	2	2	3	4		7	5	3
Mokelumne River Delta								
Terminus	7	5	a3	a2	4	6	a4	4
Southwest Point	a3	a3	4				3	2
San Joaquin River Delta								
Winter Island	44	a24	18	36	a62	91		59
Antioch	27	21	9	17	24	18	13	21
Millers Harbor	17	12	10	13	14	17		15
Opposite Central Landing								
Dutch Slough	8	a6	8	12	7	a9	12	a6
Orwood Bridge	12	13	12	12	13		12	
East Contra Costa I. D.	a14	a15	14	16	a16	a16	15	a15
Victoria	14	11	14	13	12	b13	15	11
Stockton Country Club			13			a11	10	a13
Clifton Court Ferry	a12	a12	12	18	a10	a12	ab19	11
Garwood Bridge	a12	a12	11	bkn	15	ab12	11	11
Williams Bridge	10	b11	12	15	9	b13	13	12
South Fabian					14		12	a14
Grant Line Bridge		ab11		a11		a12	a11	
Mossdale	11	a12	12	a9	a12	a11	ab12	a14
At Vernalis				e12	c12			13
DECEMBER - 1948								
San Francisco, San Pablo and Suisun Bays								
Point Orient	1460	1560	1560	1690	1550	1600	1530	
Point Pinole	1500	a1260	1150	1410		1220		1300
Point Davis	1280		1100	1340	1080		1260	1100
Grand View	1180	1150	1170	a1210	1070	1080	1070	1030
Crockett	1120	a820	990	1220		1040	980	930
Benicia				1060	790	520	940	
Martinez	970		750	940	780	e550	840	650
West Suisun	510	410	740	830	500	540	730	400
Innisfail Ferry	240	260	250	290	280	270	b260	250
Port Chicago	610	e590	680	750	540		440	520
Nichols	520	280					460	
O & A Ferry	200	a110	130	360	180	100	140	100
Pittsburg	31	30	35	67	36		27	20
Sacramento River Delta								
Collinsville	75	19	19	110	17	9		13
Three Mile Slough	3	3	4		3	a3	1	13
Rio Vista Bridge	3	3	3	2	2	12	3	1
Isleton	bkn	1	3	3	2	1	1	
Mokelumne River Delta								
Terminus	a6	bkn	a8	6	bkn	a3	a1	a6
Southwest Point	a3		2	4	5			
San Joaquin River Delta								
Winter Island	68		19	76	21	19	32	29
Antioch	30	16	14	31	23	15	15	13
Millers Harbor	18	12	6	14	17	ad10	10	9
Opposite Central Landing	5	a2	2	4	10	2	3	3
Dutch Slough	a8	a7	7	9	a7	7	6	6
Orwood Bridge	12	13	18	13	13	12	11	14
East Contra Costa I. D.	16	a14	14	14	a13	12	17	16
Victoria	12	14	7	13	13	12	b12	13
Stockton Country Club		a11		a13	a14			10
Clifton Court Ferry	14	a12	12	19	13	12	*17	10
Garwood Bridge	a13		11	a11	a11	12	b10	a9
Williams Bridge	b13		12	15			4	13
South Fabian	ab13		14	a17			a11	
Grant Line Bridge		a13		a13	bkn		a8	a8
Mossdale	a10	12	11	a13	a10	11	9	a9
At Vernalis			e12		e13-		9	b10

(a) Taken at Low High Tide.
 (b) Taken on following day.
 (c) Taken two days later.
 (e) Taken on preceding day.
 (*) Presumed.

TABLE 185

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide.
Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	January - 1949							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1450	1450	1610	1700	1570	1550	1440	1420
Point Pinole			1140				1330	
Point Davis		1000	1120	1270		1110	1100	a1000
Grand View	1010	1000	1020	1000		990	1010	990
Crockett	650	830	1010	1140	1050		a900	
Bonicia	650	700	920	1040	740	830		690
Martinez	460	690	890	870	690	730		600
West Suisun	450	430	850	830	410	530	540	490
Innisfail Ferry	250	210	270	b350	a310	270	260	b250
Port Chicago	220	460	430	670	a580	720	530	b420
Nichols					410	480		
O & A Ferry	a15	150	150	180	110	210	120	90
Pittsburg	30	e20	15	60	23	20	20	40
Sacramento River Delta								
Collinsville	a7	6		57	a10	28	13	17
Three Mile Slough	2	2	3	3	1		3	4
Rio Vista Bridge	10	2	3	2	3	2	bkn	3
Isleton	2	a2	2	2	2	bkn	2	2
Mokelumne River Delta								
Terminus	7	a3	a6	a3	5	a3	a7	8
Southwest Point		3		6		4	2	3
San Joaquin River Delta								
Winter Island	25	7	29	76	26	39	31	20
Antioch	8	7	8	13	13	19	14	10
Millers Harbor	11	5	8	13	9	10	9	9
Opposite Central Landing	3	3	6	6	a7	10	6	a3
Dutch Slough	5	7	7	7	a7	7	9	9
Orwood Bridge		13	14	b15	14	15	14	16
East Contra Costa I. D.	a17	19	18	a12	ab13	19	18	a19
Victoria	11	13	19	17	14	13	12	12
Clifton Court Ferry	11	16	14	13	10	13	11	10
Stockton Country Club	11	10		a12		9	11	a10
Garwood Bridge	a11	13	12	a11	a8	7	a8	8
Williams Bridge	b11	12	15	16	11	12	8	11
South Fabian	a11	a14		ab11		10	ab8	a11
Grant Line Bridge	a9	a14	10	a7	12	9		a7
Mossdale	a11	10	a10	a6	a9	11	a12	a8
At Vernalis		b9			c8		c8	
February - 1949								
San Francisco, San Pablo and Suisun Bays								
Point Orient	1420	1500	1510	1540	1490	1520	1430	
Point Pinole						1270		
Point Davis	880	840	1020	980	1020	1040	990	
Grand View	1010		990	1010		960		
Crockett	950	910	820	950	a680		910	
Bonicia	710	560	690	790	650		650	
Martinez	540	880	a640	500	370	660	600	
West Suisun	240	470	570	350	520	500	370	
Innisfail Ferry	b250	230	160	180	140	140	170	
Port Chicago	b320	a480	460	260	440	570	370	
Nichols	300	370		180	20	40	320	
O & A Ferry	90	a130	80	40	40	130	50	
Pittsburg	10	10	10	10	10	10	10	
Sacramento River Delta								
Collinsville	10	6	6	9	7	13	6	
Three Mile Slough		4						
Rio Vista Bridge	4	1	4	2	10	2	1	
Isleton	a3	2	1	1	a2	1	1	
Mokelumne River Delta								
Terminus	ab5	a11	a6	7	a3	a3	e7	
Southwest Point			1			4		
San Joaquin River Delta								
Winter Island	15	15	10	10	8	15	11	
Antioch	12	8	7	9	9	11	9	
Millers Harbor	8	7	ab6	13	5	9	7	
Webb Pump				8	8	8		
Opposite Central Landing	7	3	5	a6	3	6		
Dutch Slough	9	9	8	8	9	9	8	
Orwood Bridge	b12	11	13	e13	12	14	14	
East Contra Costa I. D.	21	19	16	a16	17	b17	a17	
Victoria	10	9	13	13	11	bkn	21	
Clifton Court Ferry	9							
Stockton Country Club	9	9	10	a10	11	9	a11	
Garwood Bridge	8	11	10	a10	10	10	a13	
Williams Bridge	12		13	11	10	10	16	
South Fabian		12	11	a11	12	a12	b13	
Grant Line Bridge	8	11	10	a11	11	a12	a18	
Mossdale	12	12	a8	a9	10	13	a14	
At Vernalis		e11		a8				

(a) Taken at Low High Tide.
(b) Taken on following day.

(c) Taken two days later.
(e) Taken on preceding day.

TABLE 185 (CONT'D)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide.
Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	March - 1949							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Point Orient	1360	1140	1380	1310	1220	1780	1160	
Point Pinole				700		380		
Point Davis			1050	390	301	230		420
Grand View	980	440	710	340	440	360	240	410
Crockett	870	660	730	270	468	151	380	410
Benicia	a230	a230	260	96	40	22		410
Martinez	500	200	400	18	a5	26	112	a140
West Suisun	a560	110	160	21	10	11	15	a13
Innisfail Ferry	190	50	83	110	b63	60	7	12
Port Chicago	170	130	15	3	3	4	41	a38
Nichols	350	10	7	2			ch	4
O & A Ferry	180	10	6		a3	3	4	a4
Pittsburg	30	10			5	5	7	
	10	5						
	Sacramento River Delta							
Collinsville	2	3	2	1	14	1		1
Three Mile Slough	2	1	1	10	1	4		2
Rio Vista Bridge	2	1	1	1	1	1	2	2
Isleton								1
	Mokelumne River Delta							
Terminus	a4	a9	a7	8	a6	ab5	a6	a3
Southwest Point								
	San Joaquin River Delta							
Winter Island	7	5	4	4	3			4
Antioch	6	10	3	16	8	3	4	4
Millers Harbor	6	5		5		5	4	a4
Webb Pump	7	7	6	a6	5	5	4	a4
Opposite Central Landing	1	1	1	1	5	2	4	a6
Dutch Slough	8	10	9	10	11	10	2	a1
Orwood Bridge	12	13	13	9	6	5	9	8
East Contra Costa I. D.	20	16	17	a17	b17	13	10	8
Victoria	13	14	10	8	4	5	4	4
Clifton Court Ferry			9	3	4	5	a5	4
Stockton Country Club	13	8	4	a3	3	3	a5	4
Garwood Bridge	13	6	6	b3	6	5	4	4
Williams Bridge	7	10	6	ab4	6	5	b3	a4
South Fabian	14	11	6	a3	3	4	3	a4
Grant Line Bridge	12	3	4	a2	4	3	a3	b5
Mossdale		4	4	c3		6	a3	4
At Vernalis	a13		eh			6	a3	3
							e3	3
	April - 1949							
	San Francisco, San Pablo and Suisun Bays							
Point Orient	1130	1340	a1380	1490	1340	a1000		1300
Point Pinole						a910		
Point Davis			780	780	780	680		570
Grand View	560	590	690	260	a130	a880	740	740
Crockett	620	570		540	260			610
Benicia	450	590	470	250	140	360	400	420
Martinez	282	310	240	100	70	62	130	160
West Suisun	440	290	b180	100	27	10	27	62
Innisfail Ferry	ab11	35	ab40	ab32	27	a39		a30
Port Chicago	85	195	c190	100	39	42	81	104
Nichols	27		50	100				14
O & A Ferry	a3	3	a5	a1	2	a2	a1	a2
Pittsburg	a5	5	3	6	4	a2	a2	a3
	Sacramento River Delta							
Collinsville	3	3		1	10	a4	a1	1
Three Mile Slough	2	2	2	1	1	2	1	1
Rio Vista Bridge	1	1	1	1	a1	1	1	1
Isleton								
	Mokelumne River Delta							
Terminus	a5	a1	2	a3	3	3	a2	2
Southwest Point				bkn	2	a1		1
	San Joaquin River Delta							
Winter Island	3	3	a3	2	3	a4	a2	2
Antioch	3	4	a4	2	3	a2	a2	2
Millers Harbor	4	4	a4	2	3	a2	a2	2
Webb Pump	4	4	a4	2	3	a2	a2	2
Opposite Central Landing	4	4	a4	2	3	a2	a2	2
Dutch Slough	6	6	a6	4	4	a2	a2	2
Orwood Bridge	4	4	a4	4	4	a4	a4	4
East Contra Costa I. D.	4	4	a4	4	4	a4	a4	4
Victoria	4	4	a4	4	4	a4	a4	4
Clifton Court Ferry	4	4	a4	4	4	a4	a4	4
Stockton Country Club	4	4	a4	4	4	a4	a4	4
Garwood Bridge	3	3	a3	4	4	a4	a4	4
Williams Bridge	3	3	a3	4	4	a4	a4	4
South Fabian	3	3	a3	4	4	a4	a4	4
Grant Line Bridge	3	3	a3	4	4	a4	a4	4
Mossdale	3	3	a3	4	4	a4	a4	4
At Vernalis	3	3	a3	4	4	a4	a4	4

(a) Taken at Low High Tide
(b) Taken on following day.
(c) Taken two days later

(d) Taken on preceding
(e) Taken two days earlier.

TABLE 185 (CONT'D)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide.
Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	May - 1949							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1250	1460	1540	1530	1340	1230	1390	1380
Point Pinole							1180	
Point Davis							1080	850
Grand View	820	790	890	960	620	710	830	860
Crockett		940	880	900	866	910	870	820
Benicia		610	560	890	400		780	490
Martinez	410	470		700	230	580	720	370
West Suisun	270	310		210	120	220	460	170
Innisfail Ferry	72	80	90	240	100	120	350	440
Port Chicago	a29	a29	a30	ab28	27	bkn	a20	b210
Nichols	b44	ab390	al40	230	160	b230	360	
O & A Ferry	2	a4	a8	a8	2			8
Pittsburg	a2	a3	a3	a5	4	a2	a5	a3
Sacramento River Delta								
Collinsville		a1	a3	1	1	a1	a2	2
Three Mile Slough	1	b1	1	1	1	1	1	1
Rio Vista Bridge	1	b1	2	1	1	1	3	1
Isleton	1	b1	a1	1	1	3	1	2
Mokelumne River Delta								
Terminus	a2	3	4	a3	a3	2	3	a1
Southwest Point	1			1	1			1
San Joaquin River Delta								
Winter Island	1	a1	a2	5	2	a3		
Antloch	1	a2	a2	5	3	a3		
Millers Harbor	2	a2	a2	3	3	a3	a2	3
Webb Pump	b2	a3	a3	3	3	3	a2	3
Opposite Central Landing	2	a2	ab2	2	2	a2	a3	3
Dutch Slough	3	a1	a1	2	3	a2	a2	3
Orwood Bridge	3	a4	a4	3	3	a4	a4	3
East Contra Costa I. D.	7	b7	6	4	5	3	3	3
Victoria	7	b7	4	4	b4	a4	1	3
Clifton Court Ferry	7	b4	4	4	ab3	3	3	3
Stockton Country Club	6	a3	3	5	3		3	3
Garwood Bridge	2	ed3	a4	5		a3	3	3
Williams Bridge	1	a1	a4	4	2	a3	ab5	3
South Fabian	1	b2	ab7	4	ab4	a3	b4	3
Grant Line Bridge	0	b7	5	b5	10	3	3	4
Mossdale	2		4	4	4	2	3	4
At Vernalis	c3	a2	4	4	e2	2	9	3
June - 1949								
San Francisco, San Pablo and Suisun Bays								
Point Orient	1340	1460	1610	1500	1510	1200	1580	1620
Point Pinole		a1300						
Point Davis			1150	1220	1040	1160	1320	
Grand View	950	bkn	980	960	970	1030	1060	1080
Crockett	610	a1030	1090	1060	930	a860		1080
Benicia	280	760	750	840	700	910	1000	1110
Martinez	250	510	720	720	490	800	980	980
West Suisun	130	a380	490	540	340	530	950	790
Innisfail Ferry	30	30	a50	80	a80	870	790	590
Port Chicago	110	a270	b540	370	b940	b590	a150	190
Nichols				370	310	560	160	760
O & A Ferry	6	a22	a30	a80	a40	a60	a170	200
Pittsburg	5	a12	a18	a30	a30	a24	a41	a50
Sacramento River Delta								
Collinsville	2		a3	19	a7	a9	a35	92
Three Mile Slough	2	3	2	3	b2		4	4
Rio Vista Bridge	3	2	2	1	b3	2	2	2
Isleton	1	3	3	3	3	a2	2	2
Mokelumne River Delta								
Terminus	a3	2	a4	a3		3	a1	4
Southwest Point		a2		b1				1
San Joaquin River Delta								
Winter Island	4	a7	a9	32	a15		a37	92
Antloch	3	a4	a5	11	a8		53	42
Millers Harbor	3	3	5	9	c8	a7	27	24
Webb Pump	3	a2	a1	4	a3	a4	4	
Opposite Central Landing	3	a3	a3	2	a2	a2	a3	2
Dutch Slough	3	a3	a3	2	a4	a4	4	6
Orwood Bridge	3	a3	a3	2	a4	a4	4	4
East Contra Costa I. D.	3	a3	a3	2	a4	a4	4	4
Victoria	3	a3	a3	2	a4	a4	4	4
Clifton Court Ferry	3	a3	a3	2	a4	a4	4	4
Stockton Country Club	3	a3	a3	2	a4	a4	4	4
Garwood Bridge	3	a3	a3	2	a4	a4	4	4
Williams Bridge	3	a3	a3	2	a4	a4	4	4
South Fabian	3	a3	a3	2	a4	a4	4	4
Grant Line Bridge	3	a3	a3	2	a4	a4	4	4
Mossdale	3	a3	a3	2	a4	a4	4	4
At Vernalis	3	a3	a3	2	a4	a4	4	4

(a) Taken at Low High Tide.
(b) Taken on following day.
(c) Taken two days later.

(d) Taken over 1 hour off scheduled time.
(e) Taken on preceding day.

TABLE 185 (CONT'D)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide.
Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	July - 1949							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient		e1560	1680	1600	1700	e1670	1700	1690
Point Pinole		a1410				a1490	a1520	
Point Davis	1300	e1320	1390	1300	1330	e1460	1450	1410
Grand View	1110	e1120	e1170	1190	1210	e1220	1250	1280
Crockett	1260		1380	1230		e1450		
Bonicia	970	900	1100	1040	1120	1120	1150	1150
Martinez	740	e940	930	710	940	e1130	a880	910
West Suisun	530	b700	920	750	820	940	940	700
Innisfail Ferry	a180	a160	a240	330	350	ab340	420	460
Port Chicago	a530	r890	a790	b600	f710	b1060	b1050	b930
O & A Ferry	a130	a190	a270	260	a260	a340	a400	390
Pittsburg	a90	a70	a130	a120	a120	a180	a200	a280
Sacramento River Delta								
Collinsville	a63	a66	220	176	a178	a189	a237	234
Three Mile Slough			7	8		8	15	13
Rio Vista Bridge	3	3	2	3	3	4	3	5
Isleton	2	3	3	3	a3	3	3	3
Mokelumne River Delta								
Terminous	3	3	a7	a6	5	6	a4	4
Southwest Point				1			1	a1
San Joaquin River Delta								
Winter Island	63	a64		182	133	157	163	228
Antioch	a36	a255	a42	109	a60	a74	a113	a143
Millers Harbor	29	45	61	59	77	57	139	111
Jersey Island		a6						
Webb Pump								
Opposite Central Landing		a3	a3	5		a4	a4	a5
Dutch Slough	a4	a75	5	11	a12	a11	16	a22
Orwood Bridge	b5	a5	5	5	a5	5	6	5
East Contra Costa I. D.	a7	a6	6	b7	a7	b7	7	ab6
Victoria	b7	6	6	7	a6	7	6	b7
Clifton Court Ferry		a9	10	8	a11	a8	7	a9
Stockton Country Club			8	8	a9			a11
Garwood Bridge	b10	a10	9	9	a11	a12	10	a12
Williams Bridge		a6	b6			a6		
South Fabian		b13		13		13		a14
Grant Line Bridge		14	14	16	a16	16	a15	13
Mossdale	a15	14	14	16	a17	16	17	15
At Vernalis		14		f15		16		a15
August - 1949								
San Francisco, San Pablo and Suisun Bays								
Point Orient	1720	e1740	1750	1720	1680		1770	1740
Point Pinole	a1570							
Point Davis		e1450	1450	1480	a1490	1500		1450
Grand View	1320	1340	1340	1370	a1370	1430	1440	1460
Crockett	1400	e1450	1430	b1340	1220	a1340	1450	1410
Bonicia		1240	1210	1040	1190	1220	1130	1210
Martinez	1090	1110	1120	a900		a1120	890	970
West Suisun	1000	980	810	740	890	900	720	860
Innisfail Ferry	a420	a490	a530	510	520	a520	a510	a500
Port Chicago	960	b1020	880		ac690		ab930	e960
O & A Ferry	a340	a390	a390	a360	a330	a380	a360	330
Pittsburg	a190	a230	a200	130	a170	a170	a180	a210
Sacramento River Delta								
Collinsville	a193	a192	a103	199	a150	ab200	220	a180
Three Mile Slough	14	17	20	11	10	11		11
Rio Vista Bridge	b5	3	4	4	b4	a4	4	4
Isleton	a3		5	4	b5	3	3	4
Mokelumne River Delta								
Terminous	4	a8	5	a8	a4	6	4	4
Southwest Point			1				1	
San Joaquin River Delta								
Winter Island	182	188	178	193	a160	a170	a170	160
Antioch	a84	a116	192	a114	a85	ae88	170	a90
Millers Harbor	b132	160	137	108	ab76	129	105	122
Opposite Central Landing	a4	a6	8	a7	a6	a6	7	a6
Dutch Slough	a34	a19	24	21	16	a18	19	a6
Orwood Bridge			7	8	b7	8	8	18
East Contra Costa I. D.	a6	7	7	9	a8	8	8	b8
Victoria	b5	7	8	7		8	9	a10
Clifton Court Ferry	a10	8	7	9	a10	a12	a13	b10
Stockton Country Club	a9	13	10	a12	a11	bd11	12	a16
Garwood Bridge	b11	11	11	b15	b12	13	a8	
Williams Bridge		9	9	ab8		8	9	a13
South Fabian		17	17	a18		b19		
Grant Line Bridge	a14	11	a17	19	a15	16	a15	a15
Mossdale	a16	18	16	a17	a16	16	17	a14
At Vernalis	e14		15	o14	o17	16	15	ab17

(s) Presumed.
(a) Taken at Low High Tide.
(b) Taken on following day.
(c) Taken two days later.

(d) Taken over 1 hour off scheduled time.
(e) Taken on preceding day.
(f) Taken two days earlier.

TABLE 185 (CONT'D)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide.

Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	September - 1949							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1720	1690	1720	a1480	1590	1680	1700	1580
Point Pinole				1390	1410	1440		
Point Davis	1510	1440	1270	1440	1450	1460	1410	1390
Grand View	1450	1420	1420	1440	1450	1450		1440
Crockett	1460	1340	1340	1120	1170	1250	1380	1180
Benicia	1230	1120	1040	1030	b1100	910	860	970
Martinez	1080	a810	1160	910	bkn	740		900
West Suisun	910	750	690	780	b700	500	630	670
Innisfail Ferry	a500	a490	510	480	a480	b410	410	a440
Port Chicago	850	900	c810	e790	e780	740	850	e820
O & A Ferry	a400	a320	290	a220	a220	230	a200	a200
Pittsburg		a150	137	a120	a60	80	a110	a70
Sacramento River Delta								
Collinsville		a178	141	b125		84		a88
Three Mile Slough			1	6	b5	7		
Rio Vista Bridge	b4	4	15		b2	3	7	b2
Isleton	b2	3	a4	3	a2	3	3	a2
Mokelumne River Delta								
Terminus Southwest Point	6	a4	4	4	5	4	5	3
San Joaquin River Delta								
Winter Island	b158	a132	b138	100	70	96	80	a69
Antioch	a80	a100	a84	a45	49	42	a38	a32
Millers Harbor	b150	a73	70	56	b48	40	57	b43
Jersey Island						17	22	a15
Webb Pump		b14	12	11		10	11	a9
Opposite Central Landing	8		a5	a4	a4	5	a4	a4
Dutch Slough	a17	a17	a16	a14	a14	15	14	a12
Orwood Bridge	b8	9	8	10	a11	11	10	a12
East Contra Costa I. D.	a9	10	12	11	a14	b14	a16	a18
Victoria	b10	13	11	14	a14	14	13	b16
Clifton Court Ferry	a14	14	a16	a17	a17	a18	17	a17
Stockton Country Club	a13		a13	a13		b15	14	a15
Garwood Bridge	a15	15	15	a15	b15	15	a16	a16
Williams Bridge		a11	a10			11		
South Fabian	e21			a20	b19		a18	
Grant Line Bridge	b14	a16		a16	15	a15	14	a15
Mossdale	17	14	a17	a15	b14	a13	a15	a14
At Vernalis			17	14		14		14
October - 1949								
San Francisco, San Pablo and Suisun Bays								
Point Orient	e1640		1570	a1330	1630	1720	1680	1560
Point Pinole				1320	1260	f1330	b1330	1270
Point Davis	a1250	1290	1170	1450	1440	f1440	1410	1420
Grand View		1420	1440					
Crockett		1250	1130		a1250	1340	1230	
Benicia		930	860	1120	890	1030	1140	900
Martinez	a690	760	a730	900	720		950	
West Suisun	a570	580	630	660	b560	b620	780	630
Innisfail Ferry	a410	b410	410	390	b420	410	420	420
Port Chicago	680	b720	b630	740	570	600	850	670
O & A Ferry	a240	250	230	a230	210	250	a240	230
Pittsburg	a100	90	90	a80	90	a80	a80	90
Sacramento River Delta								
Collinsville		119	86	175				97
Three Mile Slough	5	5	5	a5				5
Rio Vista Bridge	3	3	3	2	1		1	2
Isleton		2	2	a2		a1		2
Mokelumne River Delta								
Terminus Southwest Point	4	4	b6	5	a6	5	5	a4
San Joaquin River Delta								
Winter Island	a76	73	88	81		63		61
Antioch	a39	42	a35	a41	34	64	a33	41
Millers Harbor	47	40	37	51	26	47	53	25
Jersey Island		14	13	25		14	20	8
Webb Pump		9	9			8	8	6
Opposite Central Landing	a6	4	a3	a4	3	3	a3	4
Dutch Slough	a12	12	a12	a10	10	a9	a9	10
Orwood Bridge	10	13	13	12	15	15	15	a3
East Contra Costa I. D.	a17	19	a19	18	20	21	a16	16
Victoria				18	16	17	14	10
Clifton Court Ferry	a17	a17	a16	a16	15		10	12
Stockton Country Club	a15	a16	a15	a17	f16	a17		
Garwood Bridge	a16	17	18	a17	13	a10	a9	12
Williams Bridge		a10	a18					19
South Fabian		a18				a10		12
Grant Line Bridge		15	16		10	a8	10	10
Mossdale	15	a16	a14	a13	ab10	a8	a10	10
At Vernalis		a15		a15				10

(*) Presumed.
 (a) Taken at Low High Tide.
 (b) Taken on following day.

(c) Taken two days later.
 (e) Taken on preceding day.
 (f) Taken two days earlier.

TABLE 185 (CONT'D)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high tide.
Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	November - 1949							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1690	1610	1640	1360	1660	1660	1590	1590
Point Pinole			1490			1420		1340
Point Davis		1350	1310	1220	1330	1290	1170	1220
Grand View	1430	1440	1350	1350		b1290		1290
Crockett	1250	1330	1300			a1040	1160	
Benicia	1150	1120	1130	860	1060	1040	830	920
Martinez	850	950	1120	870	790	870	870	830
West Suisun	640	710	750	b600	550	580	640	520
Innisfail Ferry	500		a430	430	ab400	390	390	
Port Chicago		b830	a998		870	700	640	740
O & A Ferry	280	320	a320	190	230	260	150	190
Pittsburg	100	140	a170	50	70	130	50	60
Sacramento River Delta								
Collinsville	129	213	189	60	109	153	48	51
Three Mile Slough	5	3	60	3	3	5		4
Rio Vista Bridge	1	1	1	2	1	1	1	2
Isleton	2	2	1	2			a2	1
Mokelumne River Delta								
Terminus Southwest Point	a4	6	6	a8	a4	7	a3	a4
San Joaquin River Delta								
Winter Island	70	95	140	55	51	62	62	32
Antioch	65	a59	129	27	64	a23	29	28
Millers Harbor	37	68	74	21	24	40	17	15
Jersey Island	a13		a17	7	19		7	
Webb Pump		7	8	8	3	7	8	
Opposite Central Landing	3	4	a4		7	a2	2	4
Dutch Slough	a8	a8	9	a9	10	a9	9	10
Orwood Bridge	12	11	12	12	11	12	12	12
East Contra Costa I. D.	b16	17	a15	14	15	a14	13	12
Victoria	11	12	11	11	9	12	12	11
Clifton Court Ferry	10		10	9	10	11	11	10
Stockton Country Club	12	a12		a10	ab11	b10	11	
Garwood Bridge	12	a12	ab10		e8	a11	b11	11
Williams Bridge		14				10	11	15
South Fabian						a12		
Grant Line Bridge	a10	10	a10	9		a10	8	9
Mossdale	a11	a8	ab8	10	a9	a10	10	9
At Vernalis	b8				10	a10	10	a10
December - 1949								
San Francisco, San Pablo and Suisun Bays								
Point Orient	1550	1640	1600	1650	1740	1640	1590	1510
Point Pinole		1420		1360				1340
Point Davis	1130	1290	1260	1340	1140	1230	1240	a1290
Grand View	1290		1220	1210	1150	1160	1170	1170
Crockett	1200		1180			1110		1260
Benicia		1040	1000	1010	1200	860	850	1170
Martinez	900	900	1050	750	1040	890	890	1090
West Suisun	650	640	670	690	810	590	a480	750
Innisfail Ferry		390	a400	390	410	a410	a410	a390
Port Chicago	a760	560	690	a740		a780	b770	820
O & A Ferry	200	280	a270	190	360	260	180	310
Pittsburg	80	110	a90	80	330	a90	90	190
Sacramento River Delta								
Collinsville		112	116	48	250	146	45	148
Three Mile Slough	4	3	4	1	a7	4		2
Rio Vista Bridge	1	2	1	1	1	2	2	3
Isleton	3	1	2	1	2	1	2	2
Mokelumne River Delta								
Terminus Southwest Point	a5	a5	6	a5	a3	5	a3	a6
San Joaquin River Delta								
Winter Island	35	61	46	46	47	146	147	
Antioch	33	a19	a36	26	154	a32	37	85
Millers Harbor	22	43	35	23	75	42	21	47
Webb Pump	8	8	8	8	8	7	b8	b7
Opposite Central Landing	4	a3	a3	a4	6	a2		5
Dutch Slough	11	8	a9	9	9	a9	8	9
Orwood Bridge	11	11	11	11	12	11	abl2	12
East Contra Costa I. D.	13	a14	abl4	14	a13	a14	14	15
Victoria	11	a11	9	10	11	a11	12	13
Clifton Court Ferry			10		9	11	9	11
Stockton Country Club	11	11	a14	abl2	a10	11		11
Garwood Bridge	b11	a9	a11		b11	a10	9	11
Williams Bridge		13	b13		13	13	13	b14
South Fabian					a12	a11		
Grant Line Bridge		a8	a10	12	a9	a10	a11	a11
Mossdale	a11	a8	a10	ab9	9	a11	11	a11
At Vernalis		o10		9	o12		b12	

(a) Taken at Low High tide.
(b) Taken on following day.
(c) Taken two days later.

(e) Taken on preceding day.
(f) Taken two days earlier.

TABLE 195

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide.
Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	January - 1950							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1610	1580	1630		1550	1140	1150	1410
Point Pinole		1400			1270			880
Point Davis	1340	1290	1360	1170	1070	850	230	670
Grand View	1160	1180	1150	1110	bkn	650	680	510
Crockett		1210	1240	1220			400	
Benicia	1160	990	a540	1070	780	230	180	380
Martinez	1010	940	880	910	630	50	180	500
West Suisun	b710	640	b500	670	450	60	24	670
Innisfail Ferry	410	430	410	400	b270		127	120
Fort Chicago		b910	a480	750				
O & A Ferry	480	320	270	320	130	6	3	10
Pittsburg	220	160	90	110	30	10	5	10
Sacramento River Delta								
Collinsville	271	144	41	155	38	4	2	bkn
Three Mile Slough	4	5		3	3	a1	1	2
Rio Vista Bridge	3	1	3	1	3	1	2	1
Isleton	2	2	1	2	1	1	1	2
Mokelumne River Delta								
Terminous	6	7	a6	a4	14	a9	a6	a8
San Joaquin River Delta								
Winter Island	100	82	57	58	35	a5	6	4
Antioch	123	a44	53	61	21	a8	7	6
Millers Harbor	81	53	39	35	17	6	6	6
Opposite Central Landing	5	a4		6	a3	1	1	2
Dutch Slough	8	8	9	8	10	12	12	12
Orwood Bridge	11	13	abl3	13	15	16	11	10
East Contra Costa I. D.	a17	a16	18	b18	a20	19	18	15
Victoria	a12	13	abl3	b15	17	11	9	11
Clifton Court Ferry				a15	14	6	7	7
Empire Bridge		13	14	15	17	18	8	13
Rindge Pump		13	14	17	5	7	3	2
Stockton Country Club	a12	b11	b12	b13	a7		a4	abl4
Garwood Bridge	b11	a11	12	13	a2	5	6	5
Williams Bridge	16	14		b17	14	8	b9	10
South Fabian		abl3		15	a12	8		
Grant Line Bridge	11	a4	12	a15	a10	a5	6	a4
Mossdale	a10	a13	14	a10	a10	7	5	a3
Vernalis (Durham Ferry Bridge)	c14		c11		b6		c6	
February - 1950								
San Francisco, San Pablo and Suisun Bays								
Point Orient	1380	1310	900	1030	1060	1100	1200	
Point Pinole	920		430	590				
Point Davis	780	630	280	340	a440	450	520	
Grand View		310		270		300	360	
Crockett	630	a310	340	340	350	a380		
Benicia	330	330	140	110	260	330	400	
Martinez	410	280	90	100	38	250	290	
West Suisun	90	70	10	b10	10	21	80	
Innisfail Ferry	a110	a110	110	50	60	49	50	
Fort Chicago				10	ab2	1	90	
O & A Ferry	10	b10	20	10	1	1	9	
Pittsburg	10	a20	10	10	10	1	4	
Sacramento River Delta								
Collinsville	3	10	2			1	4	
Three Mile Slough	2	10	a2	1	1		2	
Rio Vista Bridge	2	2	1	1	2	2	2	
Isleton	1	1	2	1	1	1	1	
Mokelumne River Delta								
Terminous	8	a8	a5	a6	4	a5	a5	
San Joaquin River Delta								
Winter Island	6	7	5		ch	a4	4	
Antioch	a6	7	5	4	5	5	5	
Millers Harbor	6	6	5	3	4	4	4	
Opposite Central Landing	4	1	3	2	a1	2	2	
Dutch Slough	11	11	12	8	a9	8	9	
Orwood Bridge		10	10	8	6	6	6	
East Contra Costa I. D.	a14	16	14	11	a11	11	11	
Victoria	8	a10	9	5	6		6	
Clifton Court Ferry	5	6	6	5	6	4	a6	
Empire Bridge	11	14	5	5	5	7	8	
Rindge Pump	5	2	3	3	4	4	5	
Stockton Country Club	a4		4	3	a4	4	3	
Garwood Bridge	a5	1	4	3	b4	4	3	
Williams Bridge		b9	6	10	7		6	
South Fabian			ab5	a5	a5			
Grant Line Bridge	5	a6	5	a3	4	4	a4	
Mossdale	a7	4	3	a3	a4	5	3	
Vernalis (Durham Ferry Bridge)	c6			2				

(*) Presumed
 (a) Taken at Low High Tide.
 (b) Taken on following day.
 (c) Taken two days later.
 (d) Taken on preceding day.

TABLE 195 (CONT'D)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide.
Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	March - 1950							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1330	1340	1360	1310	1320		1003	1250
Point Pinole				940				800
Point Davis	790	770	610	820	890	730		670
Grand View		660	710	630	750	740		780
Crockett	770	720	650	650	710		180	680
Benicia	500	390	380	410	410	340	130	420
Martinez	360	140	310	360	340	260	60	250
West Suisun	130	16		150		27	10	110
Innisfall Ferry	b50	a53	41	45	a51	a59	61	a54
Port Chicago	40	a23	147	7	178	181	4	2
O & A Ferry	10	a6	7	7	a8	a3	2	3
Pittsburg	5	4	4	3	a4	a4	2	3
Sacramento River Delta								
Collinsville	2	1	2	2	2	2	b1	2
Three Mile Slough	1	5	1			bkn	1	1
Rio Vista Bridge	1	1	1	2	1	1	1	1
Isleton	2	2	1	2	1	1	1	1
Mokelumne River Delta								
Terminus	a3	a5	a3	a3	3	a3	4	a2
San Joaquin River Delta								
Winter Island	4		4		a4	b3		3
Antioch	5	4	4	3	a4	4	3	3
Millers Harbor	4	5	5	4	4	3	1	2
Opposite Central Landing	2	1	a3	3	a2	1	1	2
Dutch Slough	7	a7	5	6	6	6	6	a7
Orwood Bridge	7		6	6	7	7	8	12
East Contra Costa I. D.	10	8	9	10	8	9	10	b11
Victoria	6	7	5	7	7	8	9	11
Clifton Court Ferry	a5	5	6	6	9	9	12	7
Empire Bridge	7	6	6	7	7	4	3	4
Rindge Pump	6	5		6	6	7	7	9
Stockton Country Club	a4		6	b5	7		c8	a6
Garwood Bridge	4	a5	4	6	8	9	b8	b7
Williams Bridge	7	b7	6	9	10	13		b8
South Fabian	a3	b5						
Grant Line Bridge	4	a6						
Mossdale	a5	6	6	a8	11	13	7	a7
Vernalis (Durham Ferry Bridge)					c12			
April - 1950								
San Francisco, San Pablo and Suisun Bays								
Point Orient	1290	1330	1150	1130	1210	1060	930	a1310
Point Pinole			630	a690	a680		a950	
Point Davis	770	610	480	590	490	540	710	760
Grand View	760	730	720	720	700	700	690	710
Crockett	a570	650	260	520	a420	600	510	
Benicia		320	50	260	340	240	e340	270
Martinez	160	220	70	40	190	180	270	220
West Suisun	a30	18		b6	18	70	b40	13
Innisfall Ferry	41		39	a37	a30	b26		a16
Port Chicago		10	a1	3	124	150		a108
O & A Ferry	a3	3	2	a2	ab2	b2	a2	a3
Pittsburg	3	2	3	3	4	3	a2	a3
Sacramento River Delta								
Collinsville		2	1				a1	
Three Mile Slough	1	1		3	2	1		2
Rio Vista Bridge	1	1	1	5	1	1	b1	1
Isleton	2	1	1	1	1	2	b1	1
Mokelumne River Delta								
Terminus	a3	a2	a2	a3	2	a1	2	2
San Joaquin River Delta								
Winter Island								
Antioch	3	3	3	a3	a4	3	a4	a3
Millers Harbor	5	3	2	3	3	3	3	4
Opposite Central Landing	a1	1	2	2	1	f3	a1	a1
Dutch Slough	6	5	7	a7	7	7	a4	5
Orwood Bridge	11	9		a2	4	3	a2	2
East Contra Costa I. D.	13	a12	9	6	5	4	b3	a3
Victoria	8	7	5	4	2	4	b3	2
Clifton Court Ferry	8	5	4	2	a3			4
Empire Bridge	a6	5	3	4	6	4	b5	4
Rindge Pump	3	3	ab3	4	3	3		
Stockton Country Club		5		ab1	3		bd2	2
Garwood Bridge	ab4	b3	4	a1	3	2	a2	a1
Williams Bridge							b3	3
South Fabian								
Grant Line Bridge	5	4	3	3	4	3	b1	2
Mossdale							o3	
Vernalis (Durham Ferry Bridge)	4							

(2) Presumed.
(a) Taken at Low High Tide.
(b) Taken on following day.

(c) Taken two days later.
(d) Taken over 1 hour off scheduled time.

(e) Taken on preceding day.
(f) Taken two days earlier.

TABLE 195 (CONT'D)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide.
Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	May - 1950							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1370	1320	e1250	e1370	1360	1210	e960	e1500
Point Pinole			a890				a880	
Point Davis	740	540	e510	920		740	e640	670
Grand View	820	840	e870	880		770	740	
Crockett		590			770	820	740	
Benicia	360	300	380	570	a470	a730	e510	710
Martinez	a130	270	e100	a170	370	400	e340	530
West Suisun	14	26	59	a40	a320	a120	e120	420
Innisfail Ferry	ab19	a22		210	70	210	28	30
Port Chicago	137	87	e129	a26		22	a21	ab30
O & A Ferry	a2	5	a2	340		26	e57	200
Pittsburg	a2	a3	a1	a4	a3	3	a1	a2
				a2	a3	2	a2	a3
Sacramento River Delta								
Collinsville	a1	1	a2	a2		1	a1	a1
Three Mile Slough	2	1		2	1	1	1	1
Rio Vista Bridge	1	1	2	1	1	1	1	1
Isleton	1	2	2	a1	1	1	1	1
Mokelumne River Delta								
Terminus	a2	a2	2	a1	a2	1	3	a1
San Joaquin River Delta								
Winter Island							e2	a2
Antioch	a3	2	a2	a2	a2		a2	a2
Millers Harbor	3	3	2	3	2	4	3	1
Opposite Central Landing	a1	3	a2	a3	1		a1	2
Dutch Slough	a5	4	a3	a3	2	2	a3	a1
Orwood Bridge	3	3	3	3	5	5	3	2
East Contra Costa I. D.	3	3	a5	3	6	5	a2	2
Victoria	a2	3	4	6	6	4	2	3
Clifton Court Ferry								
Empire Bridge	3	4	4	2	3	4	3	3
Ridge Pump	3	4	a3	4				
Stockton Country Club	3	2	a4	4	ab4	ab3	a2	2
Garwood Bridge	1	4	a4	ab4	b4	2	a1	ab2
Williams Bridge	b2			a6	3			
South Fabian	3	4	a4	10				
Grant Line Bridge					3	2	1	1
Mossdale	2	4	6	4	4	1	a1	1
Vernalis (Durham Ferry Bridge)					b3		e3	2
June - 1950								
San Francisco, San Pablo and Suisun Bays								
Point Orient	1400	1290	e1030	1380	1290	1360	e1480	1550
Point Pinole								
Point Davis	920	550	e650	980	740	970	e1130	1120
Grand View	720	750	e780	750		830		880
Crockett	a630	470	e590	890	880	830	e810	1000
Benicia	550	370	e590	630	550	560	e730	900
Martinez	340	150	e320	590	360	470	e710	660
West Suisun	390	23	308	320	280	120	360	530
Innisfail Ferry	a20	a20	a18		a20	30	a28	
Port Chicago	a38	12	e250	258	340			e530
O & A Ferry	a4	a1	a7	a12	ab8	a8	a7	a40
Pittsburg	a2	a3	a8	a5	a8	4	6	
Sacramento River Delta								
Collinsville	1	a1	a2		b3	4	a2	4
Three Mile Slough	1	b1	1	1	2		2	2
Rio Vista Bridge	2	b1	1	1	2	b2	2	2
Isleton	1	b1	1	1	ab2	1	2	3
Mokelumne River Delta								
Terminus	a1	2	a2	2	a2	4	3	2
San Joaquin River Delta								
Winter Island	a2	bkn	a5	a3	a5	a4	a4	a9
Antioch	2	a2	a4	a2	4	a4	a3	12
Millers Harbor	2	3	4	3	4	a4	4	10
Opposite Central Landing	2		a2		2	a2	a2	2
Dutch Slough	2	a2	a2	3	2	a2	a2	3
Orwood Bridge		a1			3	a2	a2	
East Contra Costa I. D.	2	a1	1	3	3	5	6	a6
Victoria	3	a3	a3	3	b4	6	8	8
Clifton Court Ferry		b3	3	4	5	b6	7	a8
Empire Bridge	4	b4	4	4	5	a8	a8	
Ridge Pump	4	b1	4	4	2	b8	4	5
Stockton Country Club	2	a1	a3	3	4			
Garwood Bridge	2	abl	a2	4	0	a5		6
Williams Bridge			a2	a4		a8	a2	6
South Fabian	b1							
Grant Line Bridge	2	a1	2	4	b6	a8	4	4
Mossdale	1	a1	2	4	5	a7	3	10
Vernalis (Durham Ferry Bridge)	1		e4	5	6	5		b12

(e) Presumed.
(a) Taken at Low High Tide.
(b) Taken on following day.
(c) Taken two days later.
(d) Taken on preceding day.

TABLE 195 (CONT'D)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS.

Samples taken by local observers approximately one and one-half hours after high high tide.
Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	July - 1950							
	2	6	10	14	18	22	25	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1570	1550	a1550	1560	1580	1570	1640	1680
Point Pinole			a1370				a1430	
Point Davis	1100	1310	a1220	1340	1280	1420	a1410	
Grand View	390	870	a900	950	1030		a1050	1180
Crockett	1010				1250		a1490	
Benicia	a490	740	890	1000	1040	990	1130	1060
Martinez	690	580	a820	830	870	890	a900	930
West Suisun		710			890			
Innisfail Ferry	a52	a74		a84		242	a200	
Port Chicago			a690	490	680	a770	950	890
O & A Ferry	ab79	a64	a73	a127	a221	a173	a240	ab340
Pittsburg		a37	a29	a47	a74	a96	a97	a109
Sacramento River Delta								
Collinsville	54	a31		ab4		a80	a106	258
Three Mile Slough	2	b2	2	a2	6	4	6	8
Rio Vista Bridge				a2	2			3
Isleton	1	2	a3		2	a2	3	a3
Mokelumne River Delta								
Terminus	a2	2	5	a3	a2	3	a3	3
San Joaquin River Delta								
Winter Island	a25	a29	a28	ab56	133	a83	a106	a130
Antioch	16	a18	a12	a47	53	a37	a46	110
Millers Harbor	12	a7	22	27	50	41	83	88
Jersey Island	b5							
Opposite Central Landing		a3	a2	4	4	a6	a4	4
Dutch Slough		a4	a16	3	8	a8	a8	10
Orwood Bridge		a6	6	4	4	a5	5	4
East Contra Costa I. D.		a8	a8	4	4	a5	7	7
Victoria		6	6	6	5	b5	5	6
Clifton Court Ferry	600	b6	7	a10	5	7	a9	8
Empire Bridge	0	7	a9	5	5	b5	5	a5
Ridge Pump	0	b4	5	6	8	a7	a7	9
Stockton Country Club		b6	a5	6	8	10	10	10
Garwood Bridge	a6	a9	a9	9	10	a12	a11	11
Williams Bridge		a8	a9	a11	10	8	a7	
South Fabian				12				15
Grant Line Bridge	8		12	16	14	14	14	14
Mossdale	12	a12	13	14	16	a16	16	17
Vernalis (Durham Ferry Bridge)		b15		15		16	bkn	
August - 1950								
San Francisco, San Pablo and Suisun Bays								
Point Orient	1610	1690	a1670	1720	1710	1730	1760	1760
Point Pinole				a1540		a1520	a1540	
Point Davis	1230	1400	1380	1320	1330	1440	1370	1400
Grand View	1120	1210	1230	1300	1290	1300	1310	1350
Crockett	1250	1250	1390	a1270	1390	1520	1440	1470
Benicia	900	1050	1160	1180	950	1200	1210	1050
Martinez	740	930	1010	1000	870	1080	940	900
West Suisun			a650	840	950	950	770	960
Innisfail Ferry	350	a310	ab300	bkn	a340	a360	a430	450
Port Chicago	690	860	560	910		1010	910	770
O & A Ferry	270	ab250	a270	a280	320	a330	a330	bkn
Pittsburg	a108	a120	a130	a130	a150	a190	a190	a220
Sacramento River Delta								
Collinsville	170	a120	a130	180	170	a190	a220	280
Three Mile Slough	9	b8			10		14	15
Rio Vista Bridge	2	b4	5	2	2	b2	3	2
Isleton	2	a3	3	3	4	b2	a4	a5
Mokelumne River Delta								
Terminus	a4	4	4	5	5	5	a4	a4
San Joaquin River Delta								
Winter Island		a96	a120	a130	160	a160	a170	ab230
Antioch	a68	a36	a51	118	79	a57	143	a133
Millers Harbor	b60	66	94	94	90	b134	139	ab110
Jersey Island			a18	52				
Opposite Central Landing		a4		5	a5	a5	8	a7
Dutch Slough	a12	a10	a12	a13	13	a11	a14	a18
Orwood Bridge	6	a4	5	4	6	a7	7	6
East Contra Costa I. D.	a5	a8	6	4	6	b6	5	6
Victoria	b7	b4	a8	8	a11		10	9
Clifton Court Ferry	a4	b5	a6	5	7	b6	7	7
Empire Bridge								
Ridge Pump								
Stockton Country Club	a9	a11	a11	b5	a11	a12	12	13
Garwood Bridge	a11	a13	12	2	a13	ab14	a14	14
Williams Bridge	a6	a6	a5	a7	7	ab6		a8
South Fabian					a19		19	
Grant Line Bridge	a15	a16	16	20	a15	a15	16	a16
Mossdale	a16	a17	15	15	a16	b16	14	a13
Vernalis (Durham Ferry Bridge)	c14		c13				c16	

(*) Presumed.
(a) Taken at Low High Tide.

(b) Taken on following day.
(c) Taken two days later.

(e) Taken on preceding day.

TABLE 195 (CONT'D)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide.
Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	September - 1950							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1560	1690	a1620		1550	a1510	b1490	
Point Pinole					a1340			
Point Davis	1260	1400	*1400	1280	1290	a1200	1230	1110
Grand View	1290		1280	1310	1310	a1310		1300
Crockett		1410	bkn	1270	1160		1160	1120
Benicia	1120	1250	1160	980	1020	850	810	660
Martinez	350	1110	960	840	920	a790	620	690
West Suisun	720	1030	800				460	
Innisfall Ferry	b460	420	440	470	430		390	360
Port Chicago	790	970	540	a580	a650	e650		
O & A Ferry	a320	a350	a312	300	a210	a201	190	196
Pittsburg	a190		a174	140	a100	a81	70	a80
Sacramento River Delta								
Collinsville		a198	a116	200	121	a118	54	83
Three Mile Slough		b15		9			9	5
Rio Vista Bridge	4	b4	4	4	4	20	3	2
Isleton	4	b5	4	3	4	3	1	2
Mokelumne River Delta								
Terminus	6	a5	a5	a8	5	7	5	3
San Joaquin River Delta								
Winter Island	a180	ab183	a170	147	a87	a87	74	a55
Antioch	a87	a117	a79	82	52	a37	35	39
Millers Harbor	bkn	b124	113	78	59	54	34	39
Opposite Central Landing	a4	a6	a3	6	a5		4	a4
Dutch Slough	a16	a18	a23	a19	a16	a15	14	a12
Orwood Bridge	bkn	b7	7	18	bkn	10	11	12
East Contra Costa I. D.	a7	b7	10	a10	a9	11	a14	a18
Victoria	ab7	c9	11		b7	14	14	14
Clifton Court Ferry		a12	15	13	a17	a14	12	
Empire Bridge	7	b8	7	9	8	9	8	10
Ridge Pump								a14
Stockton Country Club	a13	a13		a14	b16	a16	ab14	
Garwood Bridge	a13	a10	a21	a15	a12	a12	b10	a11
Williams Bridge	ab9	a9	b9	8	a14		8	
South Fabian			19	19				
Grant Line Bridge	a15	a15	15	a15	a12	a10	a9	10
Mossdale	abl4	b17	14	a13	a12	11	a10	a12
Vernalis (Durham Ferry Bridge)		e14	e14		11			
October - 1950								
San Francisco, San Pablo and Suisun Bays								
Point Orient	1580	1560	1620	1680	1600	1610	1640	1560
Point Pinole				1460				1350
Point Davis	1150	1190		1430	1270	1180	1400	1150
Grand View	1320	1380	1370		1360		1320	
Crockett		1150		1430	1160			1090
Benicia		910	1010	1150	950		1020	720
Martinez	710	800	870	970	850	760	1150	690
West Suisun		620	520	770	640	610		550
Innisfall Ferry	360	390		390	380		390	410
Port Chicago		310		640		400		540
O & A Ferry	a123	a190	260	276	a230	220	330	a100
Pittsburg	80	a60	80	170	a110	110	180	a90
Sacramento River Delta								
Collinsville	49	a51	20	252	a104	70	90	a39
Three Mile Slough	2	b3	5	6	6		6	4
Rio Vista Bridge	2	b3	2	4	2	3	3	5
Isleton		b3	2		2	2	3	3
Mokelumne River Delta								
Terminus	6	5	a7	7	5	a4	6	6
San Joaquin River Delta								
Winter Island		ab57	85	188	a86	98	85	a60
Antioch	42	a22	59	69	87	45	a65	45
Millers Harbor	12	b29			b37		59	17
Opposite Central Landing		a4	4	a5	a4	4	a3	a4
Dutch Slough	a11	a11	12	a11	a10	11	11	a10
Orwood Bridge	11	e12					14	a13
East Contra Costa I. D.	a16	b15	15	16	ab17	13	a15	a15
Victoria	12		14	15	b16	15	12	11
Clifton Court Ferry	12	a14	a14		a15		12	
Empire Bridge	10	b9	9	11	b9	10	13	14
Ridge Pump		ab14	13	13				
Stockton Country Club	bd13	a13	16	a15	17		a13	
Garwood Bridge	abl4	a14	a16	abl4	a12	b11	a9	a11
Williams Bridge	a14	ab15	16	b16	a14			
South Fabian								
Grant Line Bridge	a14	b14	17	a17	a11	a9	a10	a10
Mossdale	a14	b16	a15	a12	a11	a10	a9	a10
Vernalis (Durham Ferry Bridge)	13		e16		e11	e11		b11

(a) Presumed.
(k) Taken at Low High Tide.

(b) Taken on following day.
(c) Taken two days later.

(d) Taken over 1 hour off scheduled time.
(e) Taken on preceding day.

TABLE 195 (CONT'D)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high tide.
Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	November - 1950							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1570	1430	1570	1550	1430	1010	640	900
Point Pinole	a1060		1340			420		
Point Davis	930	1200	1270	1190	1130	130	350	470
Grand View		1230	1160	1160	1090	1020	600	370
Crockett	810	1060	1180		1170			
Bonicia	bkn	860	890	960	750	70	70	120
Martinez	600	580	760	840	680	40	10	120
West Suisun	320	370	490	*750		30	*28	50
Innisfail Ferry	320	280	260	270	ab270	180	40	40
Port Chicago	a200	a550	600	650	590	4	10	30
O & A Ferry	a60	130	190	a150	110	20	10	a30
Pittsburg	a20	16	40	a33	20	7	5	a20
Sacramento River Delta								
Collinsville	a4	7	42	17	22		2	a3
Three Mile Slough	2	4	a4		4	2	1	2
Rio Vista Bridge	4	4	3	4	1	1	1	3
Isleton	3	2	3	a2	2	1		3
Mokelumne River Delta								
Terminus	3	4	7	4	1	a3	3	5
San Joaquin River Delta								
Winter Island	ab15	12	b21	a36			a4	a2
Antioch	19	10	20	31	17	a6	a5	3
Millers Harbor	11	10	14	15	15	7	5	
Opposite Central Landing	a2	4	5	a5	3	1	a1	a2
Dutch Slough	a9	9	a8	a7	7	9	4	3
Orwood Bridge	a11	12	11	11	11	b1	1	2
East Contra Costa I.D.	a15	14	14	a14	13	9	a4	a4
Victoria	b10	11	10	11		5	2	1
Clifton Court Ferry								
Empire Bridge	13	23	12	12	ab11	5	5	10
Rindge Pump								
Stockton Country Club	a11		a10	bd11	ab9	2	d1	a2
Garwood Bridge	a9	9	ab9	a9	b5		4	a3
Williams Bridge			ab11	a10	9	3	a3	
South Fabian					b10			
Grant Line Bridge	a9	a9	a9	a8	9	2	a2	a4
Mossdale	a11	a12	a10	a8	8	a2	a2	a2
Vernalis (Durham Ferry Bridge)		10		10	c7		1	
December - 1950								
San Francisco, San Pablo and Suisun Bays								
Point Orient	1030	1110	1000	720	690	970	890	930
Point Pinole		370			260	370	500	
Point Davis	410	340	90	140	190	290	490	430
Grand View	390	390	210	180	120	90	110	120
Crockett	430	340		a20	150	170	310	
Bonicia	270		30	30	20		60	150
Martinez	150	50	20	20	30	10	20	190
West Suisun		20	a7	20	20	14	7	
Innisfail Ferry		50	40	a20	30		24	a26
Port Chicago	170		2	20	a10	2		4
O & A Ferry	30	2	10	20	20	2	1	4
Pittsburg	20	3	bkn	10	10	2	3	2
Sacramento River Delta								
Collinsville		3		a20	2		a3	4
Three Mile Slough	1	2	a2	2	1	2	1	3
Rio Vista Bridge	1	2	3	2	2	2		3
Isleton	1	1	1	2	2	2		a2
Mokelumne River Delta								
Terminus	5	a7	7	a8	a7	6	4	4
San Joaquin River Delta								
Winter Island	4	2	6	a2	2	2	a2	a3
Antioch	3	3	3	a3	2	a3	2	2
Millers Harbor	2	2	4	3	2	2	2	4
Opposite Central Landing	2	3	a3	1	1	2	a2	2
Dutch Slough	3	4	5	4	2	2	a3	3
Orwood Bridge	2	2		3	4	2	4	4
East Contra Costa I. D.	b3	3	a2	3	2	a4	a3	7
Victoria	2	1	3	a4	2	3	3	6
Clifton Court Ferry								
Empire Bridge	9	9	7	10	5	5	5	4
Turner Cut								3
Stockton Country Club	1	2	a1		bd1	a2	bd1	3
Garwood Bridge	b2	b2	3		2	*a2	a2	a2
Williams Bridge		ab3		ab1	a1			
South Fabian								
Grant Line Bridge	3	a2		2	a1		a3	2
Mossdale	2	a1						
Vernalis (Durham Ferry Bridge)				b2		2	b2	

(a) Presumed. (a) Taken at Low High Tide. (d) Taken over 1 hour off scheduled time.
 (**) New station established 12/27/50 on Stockton Canal opposite Rindge Pump. (b) Taken on following day. (e) Taken on preceding day.
 (c) Taken two days later.

TABLE 208

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high tide.
Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	January - 1951							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient		1250	(b)1190	1010	1030	980	770	880
Point Pinole							370	
Point Davis	(a)520	690	760	390	510	310	160	150
Grand View	380		(b)420	460	370	260	110	180
Crockett	(a)450	700	760		550	270	160	
Benicia	380	410	340	220	450	80	30	(c)280
Martinez	280	230	310	170	370	30	30	80
West Suisun	136		24		120	7	14	30
Innisfall Ferry	(ab)32	32	27	(a)43	45		30	(a)20
Port Chicago	114			6	115		20	30
O & A Ferry	3	6	4	2	4	6	2	2
Pittsburg	3	3	(a)4	4	5	7	5	4
Sacramento River Delta								
Collinsville	2	2		1	3		2	3
Three Mile Slough	2	(a)2	1	(a)2			3	3
Rio Vista Bridge	2	2	3	4	1	2	1	2
Isleton	1	2	2	1	1	2	(a)2	2
Mokelumne River Delta								
Terminus	(a)7	(a)7	6	(a)6	(a)7	5	4	(a)5
San Joaquin River Delta								
Winter Island	3		(a)4	3				
Antioch	4		2	3				
Millers Harbor	3	4	3	3		4	3	4
Opposite Central Landing	2	3	(a)5	1	1	(a)2		
Dutch Slough	5	5	4	5	8	8	(a)6	7
Orwood Bridge	(ab)3		7	8	6	3		4
East Contra Costa I. D.	7	(a)5	(a)11	8	9	(a)7	(a)5	6
Victoria		3	7	8		3	3	bkn
Clifton Court Ferry			6	5	4	1	1	2
Empire Bridge	5	6	6	8	7	10	6	5
Rindge Pump	3	3	2	3	3	2	2	3
Turner Cut	(b)3	3	5	4	3	3	(a)1	3
Stockton Country Club	(bd)3	3	(ab)5	2	3	(ae)2	(a)2	3
Garwood Bridge	3	5	(a)5		2	(a)3	(a)2	1
Williams Bridge			6					
South Fabian			(a)5	6	(a)4	(a)2	(a)3	3
Grant Line Bridge	2	(a)4	(a)5	4	(a)3	2	(a)2	3
Mossdale	3	(a)4	(a)5	4	(a)3		(a)2	3
Vernalis (Durham Ferry Bridge)			(b)6		(b)2		3	3
February - 1951								
San Francisco, San Pablo and Suisun Bays								
Point Orient	960	1250	890	830	940	990	730	
Point Pinole	670	590						
Point Davis	390	420	380	270	250	240	280	
Grand View		190	170		230		320	
Crockett	360	340	230					
Benicia	280	110	120	50	70	bkn	120	
Martinez	170	5	6	10	20	30	40	
West Suisun	50	5		10	20	20		
Innisfall Ferry	40	(b)20	29	14	13		18	
Port Chicago	30	5		3		3	(a)3	
O & A Ferry	3	6	(a)3	2	3	4	(a)3	
Pittsburg	4	4	5	5	3	4	2	
Sacramento River Delta								
Collinsville		2	3	2	3	2	3	
Three Mile Slough	3	1		2	2	2	2	
Rio Vista Bridge	1	3	2	3	3	3	2	
Isleton	2	3	3	2	3	3	2	
Mokelumne River Delta								
Terminus	(a)7	(a)3	5	(a)7	2	5	2	
San Joaquin River Delta								
Antioch	3	(a)4	(a)4	2	4	(a)3	4	
Opposite Central Landing	2	(a)3		2	3	(a)3	2	
Dutch Slough	5	6	(a)6	6	6	5	4	
Orwood Bridge	3	4	3	3	3	4	6	
East Contra Costa I. D.	7	6	(a)7	6	(b)8	4	5	
Victoria	4	6	4	3		5	4	
Clifton Court Ferry		4	3	4		10	5	
Empire Bridge	5	6	8	5	6	5	5	
Rindge Pump	3	3	3	2	(f)30	20	3	
Turner Cut	3	3	4	2	3	3	3	
Stockton Country Club	2	(a)3	3	2	2	(a)4	(b)4	
Garwood Bridge	4	4	(b)4	(b)1	(a)3		5	
Williams Bridge								
South Fabian			(a)4	2	(a)3	(a)3	3	
Grant Line Bridge	4	(a)4	(a)4	2	2	(a)4	3	
Mossdale	3	(a)4	3	2	2	3	4	
Vernalis (Durham Ferry Bridge)		5		1		3	4	

(a) Taken at Low High Tide.
(b) Taken on following day.
(c) Taken 2 days later.

(d) Taken over 1 hour off scheduled time.
(e) Taken on preceding day.
(f) Taken 2 days earlier.

TABLE 208 (CONT'D)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high tide.
Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	March - 1951							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	770	1210	870	*1050	1140	1330	1250	1260
Point Pinole						(a)910		
Point Davis	260	*560	190	560	*580	750		430
Grand View	340	450	390	360		530		660
Crockett		470	250	430			460	410
Bericia		330		170	240			160
Martinez	70	190	20	100	270	160	370	90
West Suisun	25	9	20	26	71	47	230	50
Innisfall Ferry	15	24	(a)30	28	26	(a)50	50	30
Port Chicago		7		16	14	20	87	
O & A Ferry	3	3	(e)3	3	4	(a)4	(a)3	4
Pittsburg	4	4	(a)4	5	5	(a)6	(a)4	5
Sacramento River Delta								
Collinsville	2	2	3	1	3	(a)3		3
Three Mile Slough	2	2	3	4	2		3	3
Rio Vista Bridge	3	3	3	3	3	3	2	3
Isleton	2	2	3	2	4		2	3
Mokelumne River Delta								
Terminus	*5	(a)5	(a)6	(a)3	(a)4	6	(a)4	(a)4
San Joaquin River Delta								
Antioch	4	4	5	5	5	7	(a)4	5
Opposite Central Landing	2	2	(a)2	2	3	(a)3	3	3
Dutch Slough	5	6	7	7	7	8	*6	8
Orwood Bridge	5	7	6	6	7	6	(a)7	7
East Contra Costa I. D.	5	(a)9	7	7	(b)9	(b)7	9	8
Victoria	6	7	8	6	7	(b)7	6	6
Clifton Court Ferry		(a)5		(a)5			6	6
Empire Bridge	7	9	9	6	6	(a)7	8	6
Turner Cut	4	4	4	6		6	4	6
Stockton Country Club	6	(a)4	4		5	7		6
Garwood Bridge	(b)5	(a)5	5	4	5	6	5	7
Williams Bridge		bkn						
South Fabian								
Grant Line Bridge	(a)6	6	4		(a)5	5	5	(ab)7
Mossdale	4	(a)5	4	5	7	4	5	7
Vernalis (Durham Ferry Bridge)		3		(b)5		(e)5		8
April - 1951								
San Francisco, San Pablo and Suisun Bays								
Point Orient	1160	1330	1100	1010	1200	1310	1310	(e)1480
Point Pinole								
Point Davis	830	680	560	520	(a)690	770	820	740
Grand View		790	790	750	590	860	890	990
Crockett	610	770	(a)520	470	790			(a)520
Bericia	140	390	410	390	400	470	510	
Martinez	340	240	290	230	280	410	560	(e)270
West Suisun	13	17	18	190	60	90	110	30
Innisfall Ferry	50	(a)29	(a)29	50	(a)27	(a)25	40	(a)30
Port Chicago		(a)43	98	15		42	219	60
O & A Ferry	3	(a)7	(a)5	bkn	(a)5		12	(a)6
Pittsburg	5	(a)4		5	(a)5	(a)5	5	
Sacramento River Delta								
Collinsville	4	(a)4	3	2	(a)3		4	(a)3
Three Mile Slough	3	4	2	2	3	(a)5	2	2
Rio Vista Bridge	3	4	2	2	3	3	2	3
Isleton	(a)3	2	5	4	2			2
Mokelumne River Delta								
Terminus	(a)4	(a)4	(a)5	5	3	(a)3	3	4
San Joaquin River Delta								
Antioch	4	(a)5	5	4	(a)3	4	4	(a)3
Opposite Central Landing	3	(a)3	5		(a)2	4	4	(a)3
Dutch Slough	6	6	6	5	(a)6	5	5	(a)7
Orwood Bridge	6	8	9	12	13	11	10	(a)10
East Contra Costa I. D.	7	9	8	12	(a)15	12	(b)11	(a)12
Victoria	8	11	12	14	12	11	8	9
Clifton Court Ferry	8	(a)11	12		(a)9		11	
Empire Bridge	6	6	7	3	(a)4	6	7	7
Turner Cut		6	9	11	(a)10	10	8	(a)9
Stockton Country Club		(a)10		(bd)13	(bd)11	(a)9		
Garwood Bridge	9	12	11	(b)14	9	9	7	(a)10
Williams Bridge		(ab)14					11	14
South Fabian								
Grant Line Bridge	(a)9	10	12	14	(a)9	8	9	11
Mossdale	(bd)11		13	8	10	12	8	(a)9
Vernalis (Durham Ferry Bridge)					10		9	

(*) Presumed.

(a) Taken at Low High Tide.

(b) Taken on following day.

(d) Taken over 1 hour off scheduled times.

(e) Taken on preceding day.

TABLE 208 (CONT'D)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide.
Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	May - 1951							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1110	1290	1100	930	(e)1310	(b)1420	1300	(e)1330
Point Pinole								
Point Davis	650	660	450	550	(e)980	980	680	(e)790
Grand View	1220	bkn	890	900	(e)890	790	810	
Crockett	(a)470	540	420		(e)820			
Benicia	300	260		(b)460	690	720	308	430
Martinez	270	150	130	130	440	520	160	(e)370
West Suisun	30	40	60	30	360	220	60	(e)40
Innisfail Ferry		(a)40	(a)40	50		(a)60	30	30
Port Chicago	*110	160		(ab)50	330		90	240
O & A Ferry	(a)5	bkn	(a)3	(a)4	(a)10	(a)8	(a)6	(a)30
Pittsburg	(a)4	(a)9	4		(a)4	(a)5	4	(a)70
Sacramento River Delta								
Collinsville	(a)1	(ab)4	4	(a)3	(a)2	2	3	(a)2
Three Mile Slough	2	4	2	(ab)4	2	2	2	1
Rio Vista Bridge	1	3	2	(b)2	2	2	2	3
Isleton	2	2	3	(a)2	3	(a)3	4	(a)2
Mokelumne River Delta								
Terminus	2	(ac)5	(a)4	3	4	(a)2	(ae)2	3
San Joaquin River Delta								
Antioch	(a)4	(ab)5	4	(a)4	(a)6	(a)4	4	(a)5
Opposite Central Landing	(a)3	(a)3	2			(a)3	2	(a)3
Dutch Slough	(a)5	7	8	(a)7	(a)6	5	5	(a)6
Orwood Bridge	10	8	(ab)5	5	6	6	2	2
East Contra Costa I. D.	(a)11	13	7	(a)5	5	7	6	(ab)3
Victoria		10	4	(b)4	8	(b)8	3	3
Clifton Court Ferry	(a)9	(b)7	4	(a)6	(a)7			
Empire Bridge		6	4	(a)4	(a)5	5	6	3
Turner Cut	(a)8	8	5	(a)5	(a)5	7	5	
Stockton Country Club	(a)9		(bd)5	(e)4	(a)6	7	3	(a)3
Garwood Bridge	5	5	3	(a)6	7	8	2	2
Williams Bridge				(ab)9		8	(b)2	
South Fabian								
Grant Line Bridge	(a)5	(a)6	(a)3	(b)8	8	8	5	2
Mossdale	(a)5	5	5	(a)6	6	5	2	(a)1
Vernalis (Durham Ferry Bridge)		(b)4				4		2
June - 1951								
San Francisco, San Pablo and Suisun Bays								
Point Orient	1390	1420	1300	1360	(e)1610	1520	1500	
Point Pinole				(a)1140	(a)1250		1240	
Point Davis	800	980	870	1120	1100	1100	1080	1140
Grand View	850	900	890	(e)850	(b)890	1050	1050	
Crockett	630	800	750		1180	1090		
Benicia	600	610	450	580	(e)980	860	740	(b)1010
Martinez	350	510	420	660	750	730	550	760
West Suisun	105	270	370	(b)410	490	410		710
Innisfail Ferry	(a)40	(a)30	(a)30	26	(a)79	(a)99	108	*104
Port Chicago	182		160		310	(ab)480	(a)250	650
O & A Ferry	(a)6	(a)15	11	20	(a)59	70	(a)34	(a)49
Pittsburg	(a)60	(a)5	7	(a)15	(a)18	(a)21	(a)31	(a)33
Sacramento River Delta								
Collinsville	(a)2	(b)2	4	(a)4		46		
Three Mile Slough	2	2	2	(b)4	2	3	2	3
Rio Vista Bridge				(b)3	2	2	(b)2	2
Isleton	2	2	2	(b)2	2	2	(b)2	2
Mokelumne River Delta								
Terminus	*2	(a)4	3	6	(a)4	(a)3	3	3
San Joaquin River Delta								
Antioch	(a)3	4	5	(a)4	(a)7	12	(a)8	10
Opposite Central Landing			3	(a)2	(a)3	3	(a)5	(a)3
Dutch Slough	(a)5	5	3	(a)4	(a)4		(a)4	(a)4
Orwood Bridge			4	(b)3	4	7	(a)4	6
East Contra Costa I. D.	2	(a)2	6	(a)6	(a)7	(b)7	(b)5	4
Victoria	2	(a)4	5	(b)7	8	6	(b)5	4
Clifton Court Ferry		3			10		(a)6	
Empire Bridge		2	2	(b)5	6	6	(b)5	3
Turner Cut	(a)2	2	4	(a)6	5	7	(b)5	(a)4
Stockton Country Club	(a)2	3	6	(a)8	(bd)5	4	(ab)4	
Garwood Bridge	1	4	10	(a)7	3		(a)7	8
Williams Bridge			11			(b)8		(ab)10
South Fabian								
Grant Line Bridge	1	(a)6		8			8	10
Mossdale	(a)1	6	6	(a)8	5	5	(a)7	13
Vernalis (Durham Ferry Bridge)		(b)9			3		(b)10	

(*) Presumed
(a) Taken at Low High Tide.
(b) Taken on following day.

(c) Taken 2 days later.
(d) Taken over 1 hour off scheduled time.
(e) Taken on preceding day.

TABLE 208 (CONT'D)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide.
Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	July - 1951							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1610	1650	1580	1630	1660	1680	1610	(e)1670
Point Pinole								(a)1440
Point Davis	(b)1150	bkn	1330		1280	1400	1290	(e)1260
Grand View	(b)1230	1290	(d)1300		(b)1240	1240	1260	(e)1230
Crockett	(a)1050	1110	1120	1300	(a)1180	1310	1320	1280
Benicia	980	920	930	1120	1090	1090	1120	1130
Martinez	860	810	690	920	930	870	880	960
West Suisun	(e)600		467	(a)550	650	670	(a)590	730
Innisfall Ferry	(a)110	(a)114	157		(a)180	(a)273	310	
Port Chicago			350	310	840	660	750	750
O & A Ferry	(a)85	(a)91	(a)104	(a)100	(a)180	250	(a)260	300
Pittsburg	(a)27	(a)29	(a)43	(a)44	(a)129	(a)80	(a)95	(a)80
Sacramento River Delta								
Collinsville	(a)26	(a)29	(a)43	(a)43		106	(a)87	(a)108
Three Mile Slough	3		4			6	(b)4	5
Rio Vista Bridge	3	3	3	(b)4	3	3	(b)3	3
Isleton	3	2	3	(b)3	3	3	(b)3	3
Mokelumne River Delta								
Terminous	(a)4	(a)5	3	4	3	(a)4	3	4
San Joaquin River Delta								
Antioch	(a)12	24	(a)22	(a)18	(a)25	55	(a)32	(a)35
Opposite Central Landing	(a)3		(a)4	(a)4	4	4	(a)4	(a)4
Dutch Slough	(a)5		(a)5	(a)5	5	6	(a)7	(a)10
Orwood Bridge	5		(a)7	(b)5	5	5	(a)4	5
East Contra Costa I. D.	5		(b)7	(a)9	7	(b)8	(b)6	7
Victoria	4		(a)8	bkn	6	5	(a)6	
Clifton Court Ferry	4		(a)10		6	5	(a)5	6
Empire Bridge	5		(b)6	(b)6	7	5	(b)6	(a)5
Turner Cut	(a)4	7	(a)4	(a)7	6	5	(a)6	
Stockton Country Club	6			(a)6	11	12	(a)12	
Garwood Bridge	7	10	(a)13	(a)15	13	13	(a)14	13
Williams Bridge	(a)13	15	(ab)16		17		(b)5	(a)6
South Fabian								
Grant Line Bridge		15	(a)17	(a)17	17	16	(a)18	16
Mossdale	(a)4	16	(a)15	(a)19	16	18	(a)17	18
Vernalis (Durham Ferry Bridge)				22	(c)17			
August - 1951								
San Francisco, San Pablo and Suisun Bays								
Point Orient				(e)1660	1700	1650	1600	1630
Point Pinole								
Point Davis	1350	1250	1380	1340	1410	1380	1390	1310
Grand View	1300	1290	1270	1290	1290	1280	1280	1300
Crockett		(a)1290	1480		1450	(a)1120		1290
Benicia	1130	1000	1110	1180	1220	1160	(b)1110	1100
Martinez	1010	(a)690	920	970	830	870	900	920
West Suisun	770	*610	980	760		560	(#)840	
Innisfall Ferry	(a)310	304	380	320	(a)370	360	(ab)760	510
Port Chicago	840	640	(a)490	590	850	860	(a)760	510
O & A Ferry	280	(a)210	320	(b)400	(a)270	bkn	440	270
Pittsburg	(a)90	(a)90	(a)90		(a)77	(a)129	(a)240	(a)90
Sacramento River Delta								
Collinsville	(a)92	113	(a)86	(a)63	(a)175	(a)160	(a)150	(a)130
Three Mile Slough	4	5	4		7	7	(b)14	6
Rio Vista Bridge	2	2	2	3	3	2	(b)3	2
Isleton	2	2	2	(a)2	2	2	(b)2	2
Mokelumne River Delta								
Terminous	4	4	3	(e)4	(a)4	4	3	(a)4
San Joaquin River Delta								
Antioch	(a)43	53	(a)43	(a)47	97	87	(a)60	(a)61
Opposite Central Landing	5	5		(a)2		(a)5	(a)3	(a)3
Dutch Slough	10	10	9	(a)8	11	(a)12	(a)10	(a)13
Orwood Bridge	6	4	(a)5	5	5		(b)4	6
East Contra Costa I. D.	5	5	(b)6	6	7	(a)7	(ab)7	7
Victoria	5	5			6	5	(b)5	
Clifton Court Ferry	7							5
Empire Bridge	6	7	(b)6	6	6	5	(b)5	5
Turner Cut	7	6		(a)5	6	(a)6	(b)5	(a)7
Stockton Country Club	11		(a)13	(ab)13	(f)11	16	(a)14	13
Garwood Bridge	13	14	(a)14	13	14	(a)16	(a)14	16
Williams Bridge	(b)5	5	(a)7					(a)7
South Fabian								
Grant Line Bridge	16	17	(a)18	16	16	(a)15	(a)15	(a)15
Mossdale	16	17	(a)17	16	16	(a)16	(a)15	14
Vernalis (Durham Ferry Bridge)	(e)15		14		15			(b)13

(a) Presumed.
(a) Taken at Low High Tide.
(b) Taken on following day.
(c) Taken 2 days later.

(d) Taken over 1 hour off scheduled time.
(e) Taken on preceding day.
(f) Taken 2 days earlier.

TABLE 208 (CONT'D)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide.
Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	September - 1951							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	(b)1660	1640	(b)1710	1760	1730	1750	(e)1650	1680
Point Pinole			1430				(a)1430	
Point Davis			(e)1330		1350	1180	(e)1260	1320
Grand View	1270		1510	1280	1350	1590	(e)1360	1330
Crockett		1240	1220	1100	1000	1210	(a)1170	
Benicia	1150	1080	970	800	810	960	(a)890	1070
Martinez	830	800	970	800	810	960	(a)810	740
West Suisun	840	970	1080	960	790	1000		
Innisfall Ferry	360	370	390	(a)410	440	380	(a)260	
Port Chicago	730	420	(a)400	870		680	(a)710	(a)620
O & A Ferry	230		370	bkn	(a)170	180	260	(a)170
Pittsburg	(a)70	(a)82	(a)100	(a)110	90	(a)80	(a)120	80
Sacramento River Delta								
Collinsville		150	(b)3	60	(a)90	80	(a)90	
Three Mile Slough		5	(b)2	7		2	2	2
Rio Vista Bridge	2	2	(b)2	2	3	4	4	3
Isleton	2	2	(b)2	2	2	3	2	2
Mokelumne River Delta								
Terminous	(a)3	3	4	(a)3	3	2	4	2
San Joaquin River Delta								
Antioch	82	64	(a)35	(a)35	40	(a)22	(a)26	35
Opposite Central Landing		(a)8	(a)2	(a)4	(a)2	(a)3	(a)5	3
Dutch Slough	10	4	(a)9	(a)9	(a)8	12	(a)17	(a)7
Orwood Bridge	6	4	(a)6	3	7	7	7	
East Contra Costa I. D.	6	8	(a)7	8	(a)8	(a)9	(a)11	(a)12
Victoria	6		(b)6	(b)8	7	(a)8	(a)6	
Clifton Court Ferry								
Empire Bridge	7	5	(b)6	5	7	6	7	7
Turner Cut	6		(a)6	7	7	(a)9		(a)9
Stockton Country Club	13	(a)15	(a)16	16	(bd)16	(a)17	(a)16	(a)16
Garwood Bridge	16	13	(b)15	16	16	17	17	15
Williams Bridge								
South Fabian								
Grant Line Bridge	(a)14	(b)13	12	(a)11	14	14	(a)9	14
Hossdale	13	(a)13	(a)13	(a)13	(a)13	(a)15	13	(a)13
Vernalis		15				5		
October - 1951								
San Francisco, San Pablo and Suisun Bays								
Point Orient	1770	1670	1610	(c)1760	1660	1530	1710	1580
Point Pinole			(a)1490		1550	(a)1350		1470
Point Davis	1460	1240	1400	1380	1140	(a)1170		
Grand View		1400	1350	1270	1320	1390	1380	
Crockett			1230				1160	1350
Benicia	590	950	(a)1090	1020		880		1180
Martinez	970	980	880	840	910	750	750	820
West Suisun		(a)530	780	800	780	660	640	
Innisfall Ferry	(a)370	350	(a)350	340				
Port Chicago	730	590	(b)680	610	(b)670	(a)420	550	810
O & A Ferry	(a)150	240	240	(a)200	bkn	280	(a)160	(a)150
Pittsburg		(a)40	(a)70	80	110	(a)90	60	110
Sacramento River Delta								
Collinsville		(a)40		130	110	80		80
Three Mile Slough	4	3			4	4		4
Rio Vista Bridge	2	3	(b)3	3	2	3		4
Isleton	2	2	(b)2	2	2	2	3	(ab)3
Mokelumne River Delta								
Terminous	4	5	4	3	5	5	(a)5	(a)6
San Joaquin River Delta								
Antioch	29	32	(a)20	29	37	25	14	22
Opposite Central Landing	(a)8	(a)2	(a)2	2	(a)3	(a)2	2	4
Dutch Slough	(a)6	(a)6	(a)5	6	(a)6	(a)5	6	6
Orwood Bridge	7	6	(a)8	11	8	(a)10	9	10
East Contra Costa I. D.	19	(ab)11	(a)15	8	(a)11	(a)11	13	12
Victoria	8		(b)11	10	9	(b)8	10	10
Clifton Court Ferry								
Empire Bridge	6	8	(b)8	8	8	9	8	8
Turner Cut	8	10	(a)13	12	(a)12	(a)12	12	14
Stockton Country Club	(bd)17	(a)16	(a)13	(a)12	(a)12	(b)11	13	(a)13
Garwood Bridge	16	15	(a)10	11	12	(a)11	13	12
Williams Bridge			(ab)9		10		(b)12	(e)11
South Fabian								
Grant Line Bridge	11	12	9	(a)11	(a)10	(a)11	(a)12	10
Hossdale	(a)12	(a)8	(a)9	(a)10	(a)10	(a)11	13	(a)13
Vernalis (Durham Ferry Bridge)			(b)9		10		(a)12	

(*) Presumed.
(*) Taken at Low High Tide.
(b) Taken on following day.

(e) Taken 2 days later.
(d) Taken over 1 hour off scheduled time.
(a) Taken on preceding day.

TABLE 200 (CONT'D)

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after
high high tide.

Salinity expressed in parts of chlorine per 100,000 parts of water.

Station	November - 1951							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	1710	1690	1730	1520	1610		1580	1530
Point Pinole		(a)1280		1390				1350
Point Davis	1300	1250	1320		1100	1060	1180	1190
Grand View	1240	1240		1300	1220	1300	1120	1100
Crockett	1310	1040			1080		1140	1240
Benicia	1050	910	930		770	690	920	480
Martinez	830		930	780	810	670	620	760
West Suisun		750		(a)630				
Innisfall Ferry		370	260	340	270	(a)310	(a)310	
Port Chicago	660	(a)560	730	580	400	470	610	710
O & A Ferry	(a)110	160	180	150	(a)150	200	110	160
Pittsburg	80	(a)60		80	(a)50	80	80	70
Sacramento River Delta								
Collinsville	(a)100	(a)60	80		100		60	60
Three Mile Slough	3	4	6	3	5	(a)6	4	3
Rio Vista Bridge	3	2	7	4	3	3	6	3
Isleton	2	3	2	(a)2	2	2	3	2
Mokelumne River Delta								
Terminus	4	4	(a)2	5	4	5	(a)4	4
San Joaquin River Delta								
Antioch	18	21	10	(a)30	60	40	30	*16
Opposite Central Landing	(a)4	4	3	(a)3	(a)2	8	4	(a)2
Dutch Slough	(a)6	(a)6	7	(a)6	8		9	(a)7
Orwood Bridge	(b)10	(a)11	11	13	13	14	14	12
East Contra Costa I. D.	13	(a)15	12	(a)14	(a)15	14	15	(a)14
Victoria	bkn		10	12	13		12	12
Clifton Court Ferry								
Empire Bridge	6	(a)8	*5	8	8	10	8	10
Turner Cut	10	(a)12	11	9	(a)13	14		(a)11
Stockton Country Club	(a)13	(ab)12	13	(ab)14	(a)13	(d)14		(a)10
Garwood Bridge	12	(a)12	(a)13	13	13	11	9	10
Williams Bridge			(a)13	12	13	13		
South Fabian								
Grant Line Bridge	(a)11	(a)12	12	11	12	12	11	11
Mossdale	(a)10	(a)12	(a)11	(a)13	(a)11	(*b)12	(*a)11	10
Vernalis (Durham Ferry Bridge)	11		11					
December - 1951								
San Francisco, San Pablo and Suisun Bays								
Point Orient	1430	1330	1230	1230	1330	1140	1490	1330
Point Pinole			800					
Point Davis	1130	380		900	730		1190	730
Grand View	1020	970		(b)680	630	630	700	730
Crockett	450		(a)310	680	720		1130	720
Benicia	620	250		400	610		820	560
Martinez	380		260	570	690	510	880	80
West Suisun	370	(a)60		150	260		640	290
Innisfall Ferry	230	(a)240		120	110	(a)120		130
Port Chicago	340	(a)30	110	140		360	720	130
O & A Ferry	(a)160	40	30	50	bkn	30	240	20
Pittsburg	(a)80	2	60	30	(a)10	20	50	50
Sacramento River Delta								
Collinsville		20		10	40	30	20	
Three Mile Slough								
Rio Vista Bridge	4	2	3	3	5	2	2	2
Isleton	2	1	2	2	6	*4	2	1
Mokelumne River Delta								
Terminus	5	(a)4	(a)4	5	6	(a)2	(a)2	3
San Joaquin River Delta								
Antioch		6	5	bkn	4	30	(ab)10	(a)20
Opposite Central Landing	(a)3	2	3	(a)3	(a)3		(a)10	(a)2
Dutch Slough	(a)5	8	9	(a)8	(a)9	9	(a)7	(a)8
Orwood Bridge		14	10	(a)9	8	8	8	
East Contra Costa I. D.	14	15	14	(a)14	(*a)13	11	(a)11	(a)15
Victoria	11	12	10	10		9	9	8
Clifton Court Ferry								
Empire Bridge	6	7	7	8	7	7	9	11
Turner Cut	(a)9	8	6	7	(a)7		6	(a)5
Stockton Country Club		(bd)6		(a)6	8		6	(a)5
Garwood Bridge	8	7	5	8	8	11	6	4
Williams Bridge			10				10	
Grant Line Bridge	13	8	5	(e)7	10	(a)7	8	8
Mossdale	(a)10	6	(a)5	(a)7	(a)8	6	(a)6	(a)5
Vernalis (Durham Ferry Bridge)		6		7		7		8

(* Presumed.
(a) Taken at Low High Tide.
(b) Taken on following day.

(d) Taken over 1 hour off scheduled time.
(e) Taken on preceding day.

TABLE 214
DESCRIPTION OF ACTIVE SALINITY OBSERVATION STATIONS - 1952
(Cont'd)

(Refer to previous Water Supervision Reports for description of stations which have been discontinued.)

STATION	Miles From Golden Gate (a)	Time Interval (b)		LOCATION
		Hours	Mins.	
SAN JOAQUIN RIVER DELTA				
East Contra Costa I. D.	66.7	8	20	Indian Slough, at East Contra Costa Irrigation District Pumping Plant.
Victoria (d)	39.6	8	35	Old River at Borden Highway Crossing.
Clifton Court Ferry	94.2	9	10	Old River just below junction with Grant Line Canal.
Stockton Country Club (d)	94.8	9	15	Near Head of Stockton Channel at Wharf of California Transportation Company.
Garwood Bridge (d)	95.3	9	15	San Joaquin River, at Drawbridge one mile above Santa Fe Railroad Crossing.
South Fabian (d)	100.0	9	40	Old River, two miles East of Bethany.
Grant Line Bridge (d)	101.0	9	50	Grant Line Canal, 5.5 miles above junction with Old River, at Tracy Road Crossing.
Williams Bridge (d)	101.6	9	55	Middle River, about four miles below Salmon Slough Junction.
Mossdale Bridge	103.5	10	50	San Joaquin River at U. S. 50 Highway Crossing about three miles southwest of Lathrop.
Vernalis (Durham Ferry bridge)	127.0	11	00	San Joaquin River at Durham Ferry Bridge, above tidal influence.

- (a) Mileage measured to station along main channel. For stations off the main channel, the mileage shown is the same distance along the main channel to a point whereon the time of the occurrence of the tidal phase is the same as that of the observation station.
- (b) Time interval between high tide at Golden Gate and time for taking samples at station.
- (c) Station added during 1952.
- (d) Station discontinued during 1952.

TABLE 215
SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
Samples taken by local observers approximately one and one-half hours after high high tide.
Salinity expressed in parts of chloride per million parts of water.

STATION	January - 1952							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	13600	9800	11500	5200	7000	7700	7900	8500
Point Pinola		4700	5000	2500	1600	1300		1700
Point Davis		5600	3800	2300	600	1100		800
Grand View	6800		(a)2700	1300	600	1200	1000	
Crockett				600	200	1800	1500	
Bentola	800	3300	2700	600	200	1300	700	100
Martinez	300	2200	3600	500	200	400	100	100
West Suisun	400	1600			100			100
Innisfaul Ferry	(a)900		600	600	300	200	400	(a)200
Port Chicago	400	200	100	200		100	200	200
O & A Ferry	100	100	200	200	(a)100	400	200	(a)200
Pittsburg	100	100	200	100	100	200	100	100
Sacramento River Delta								
Collinsville		100	(b)200	100	100	100	100	100
Three Mile Slough				20	20	20	20	20
Rio Vista Bridge	30	30	20	20	20	40	20	20
Isleton	10	10	20	20	20	(a)10	20	20
Nokolumne River Delta								
Terminus	(a)40	(a)10	(a)20	20	(a)20	(a)90	40	(a)50
San Joaquin River Delta								
Antioch	100	100	(a)100	(a)100	100	200	(a)100	(a)100
Opposite Central Landing	20	10	20	(a)40	20	20	30	20
Dutch Slough	90	90	90	(a)70	90	(a)100	(a)70	90
Garwood Bridge	90	bn		80	60	50	50	40
East Contra Costa I. D.	(b)170	170	170	(a)90	90	(b)110	(a)110	(a)80
Victoria	70	60	60	50	60	60	50	50
Clifton Court Ferry								
Empire Bridge	70	50	90	40	30	60	80	60
Turner Cut	20	50	40	(a)20		30	(bd)30	20
Stockton Country Club	50	30	(bd)30	(b)40	20	30	(ab)20	20
Garwood Bridge	30	30	40	20	30	30	30	20
Williams Bridge							(a)40	20
Grant Line Bridge	60	(a)40	100	50	20	30	20	(a)20
Mossdale	40	30	(a)30	(a)20	(a)30	(a)20	(a)20	20
Vernalis			20	20	30	40	20	

- (*) Presumed.
- (a) Taken at Low High Tide.
- (b) Taken on following day.

- (c) Taken two days later.
- (d) Taken over 1 hour off scheduled time.
- (e) Taken on preceding day.

TABLE 215

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide.
Salinity expressed in parts of chloride per million parts of water.

Station	February - 1952							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Point Orient	5600	6500	9200	6800	9600	8900	8800	
Point Pinole						6400	4400	
Point Davis	1200		2600	3400	4300	5500	3700	
Grand View	300	1500		1500	2300	2800	2300	
Crockett	700	1000		2300		2700	1600	
Benicia	400				200		900	
Martinez	100	100	100	100	700	1000	100	
West Suisun		100	100	100		200	100	
Innisfall Ferry	200			(a)200	(a)200		300	
Fort Chicago	200	100	(a)100	100	(a)100		100	
O & A Ferry	200	100	300	(a)100	100	100	300	
Pittsburg	300	100	bkn	(a)200	300	300	100	
	Sacramento River Delta							
Collinsville	100	100		30	100	100	100	
Three Mile Slough	30	20	20	20	20	20	20	
Rio Vista Slough	20	20	10	20	20	20	bkn	
Isleton	20	20	10	20		20	20	
	Mokelumne River Delta							
Terminous	60	(a)50		(a)50	(a)60	(a)60	60	
	San Joaquin River Delta							
Antioch	100	100	100	(a)100	100	100	100	
Opposite Central Landing	20	20	30	20	20			
Dutch Slough	60	60	(a)70	50	60	50	(a)50	
Orwood Bridge	(a)40	40		30	40	40	30	
East Contra Costa I. D.	90	100	60	(a)60	(b)70	80	(a)60	
Victoria	40	30	40	40	30	40	20	
Clifton Court Ferry								
Empire Bridge	90	50	60	40	30	50	60	
Turner Cut		(b)20	(a)40	30		20	(a)20	
Stockton Country Club	30	(a)20	20	20		20		
Garwood Bridge	20	30	20	30	20	20	20	
Williams Bridge	40		(e)30		30	(b)30	30	
Grant Line Bridge	(a)20	(a)30	30	20	(a)30	(a)20	20	
Mossdale	20	(a)20	(a)20	20	20	(a)20	(a)20	
Vernalis	(e)20	(e)30	(e)30	(f)20	(b)20	(b)30	20	
	March - 1952							
	San Francisco, San Pablo and Suisun Bays							
Point Orient	6100	10100	10200	10200	7300	8000		8100
Point Pinole		7700	5500					
Point Davis	1600	4600	4100	5300	2300		2800	1500
Grand View	2300	3400	3200	4200	3100	3300	3300	3000
Crockett		4900		2900	1400		(a)700	
Benicia	400	2500		1200	300	100	700	400
Martinez	100	3400	500	500	800	100	(a)100	100
West Suisun	100	400	200	bkn	100		100	
Innisfall Ferry	(a)300		300	300	(a)200	200		(a)200
Fort Chicago	(a)100	1100		100	200	(a)100	100	(a)100
O & A Ferry	100	300	200	(a)100	100	100	(a)100	100
Pittsburg	100	100	200	(a)100	200	100	(a)100	100
	Sacramento River Delta							
Collinsville	30	100	50		100		(a)30	30
Three Mile Slough	20	20	20	20	(ab)20	20	20	20
Rio Vista Slough	20	20	20	20	20	20	20	20
Isleton	20	20	20	(s)20	20	20	20	20
	Mokelumne River Delta							
Terminous	(a)20	(a)50	50	(a)50	(a)60	(a)40	(a)40	(a)40
	San Joaquin River Delta							
Antioch	100	100	100	100	100	100	(a)100	100
Opposite Central Landing	20	20	20	100	100	20	20	20
Dutch Slough	50	50	50	50	60	50	40	30
Orwood Bridge	(ab)30	30	40	30	30		20	(ab)20
East Contra Costa I. D.	50	60	(a)80	80	70	50	(b)50	20
Victoria	30	40	30	40	30	20	60	30
Clifton Court Ferry								
Empire Bridge	30	60	30	40	60	60	(a)40	30
Turner Cut	30	30	20	30	30	(b)20	40	20
Stockton Country Club	20	(e)30	20	20	30	(c)20		20
Garwood Bridge	30	20	20	30	20	20	20	20
Williams Bridge			(ab)30	30				20
Grant Line Bridge	20	20	40	20	20	(a)20	40	20
Mossdale	20	(a)30	(a)20	20	20	(a)30	20	20
Vernalis	(e)20	(f)20	(f)20	(b)20				(e)20

(s) Presumed.
(a) Taken at Low High Tide.
(b) Taken on following day.
(c) Taken two days later.

(d) Taken over one hour off scheduled time.
(e) Taken on preceding day.
(f) Taken two days earlier.

TABLE 215

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours after high tide.
 Salinity expressed in parts of chloride per million parts of water.

Station	April - 1952							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Point Orient	7000	(e)7300	9700	8400	11100	9800	10800	6200
Point Pinole					4600			
Point Davis		3600	2800	1300			1800	2600
Grand View	3200	3700	4000	4200	3800	5000	4600	4000
Crockett	(a)1800	4000	3500	(e)800	1300	(a)1800	2200	
Benicia	400	2700	1000	100	500	1600	800	100
Martinez	400	(a)700	(a)100	600	300	(a)100	100	100
West Suisun	100	400	100	100		100	100	100
Innisfail Ferry	100			100		100		
Fort Chicago	100	(b)100	(a)100	(a)100	100	(a)100	(a)200	100
O & A Ferry	100	(a)100	bkn	100	100	(a)100	(a)100	100
Pittsburg	100	(a)100	(a)400	100	100	(a)100	(a)100	100
	Sacramento River Delta							
Collinsville	20	(a)20	(a)20	(a)20	20			20
Three Mile Slough	(a)20	(a)20	20	(a)20	20	(a)20	20	20
Rio Vista Bridge	20	20	20	20	20	20	20	20
Isleton	20	20	20	20	20	20	20	20
	Mokelumne River Delta							
Terminous	(a)30	20	(a)20	(a)20	(a)20	30	(a)20	(a)20
	San Joaquin River Delta							
Antioch	100	(a)100	(a)100	100	100	(a)100	100	100
Opposite Central Landing	20	(a)20	(a)10	20	20	(a)20	20	20
Dutch Slough	20	(a)20	20	20	20	(a)20	30	20
Orwood Bridge	20	20	20	20	20	20	20	20
East Contra Costa I. D.	20	(b)30	20	20	20	(a)30	20	20
Victoria	20	30	40	20	20	20	20	30
Clifton Court Ferry								
Empire Bridge	60	40	(a)30	20	30	40	20	20
Turner Cut	20		20	20	20	20	20	20
Stockton Country Club	(bd)20	20	20	(a)20	20	20	20	20
Garwood Bridge	20	20	20	20	20	20	20	20
Williams Bridge		(ab)20						
Grant Line Bridge	20	20				(a)20	20	20
Mossdale	20	20	20	20	20	20	20	20
Vernalis	(e)20	20	(f)20	(f)20	(f)20	20	30	
	May - 1952							
	San Francisco, San Pablo and Suisun Bays							
Point Orient	6200	(e)6900	9400	10800	9900	8700	7400	5000
Point Pinole		(a)4000					(a)4700	
Point Davis	1100	(a)1900	bkn	800	3300		1000	1200
Grand View		3300	3100	3700	3500	3700	3400	2500
Crockett	2600			(a)300	3700			1500
Benicia	100	900	1800	200		1400		1500
Martinez		200	400	100	100	200	100	100
West Suisun	100	100	100	100	(b)100	100	100	20
Innisfail Ferry								
Fort Chicago	(a)100		100	100	(b)100	(b)100		20
O & A Ferry	(a)100	(a)100	(a)100	100	(a)100	(a)100	(a)20	(a)10
Pittsburg	(a)100	(a)100	(a)100	(a)100	(a)100	(a)400	(a)20	(a)500
	Sacramento River Delta							
Collinsville	(a)20	(a)20		20			10	(a)10
Three Mile Slough	(b)20	20	(a)20	20	(b)20		10	
Rio Vista Bridge	(b)20	20	20	20	(b)20	30	10	(b)20
Isleton	(b)20	(a)20	20	20	(b)20	20	20	20
	Mokelumne River Delta							
Terminous	(a)20	20	(a)20	(a)20	20	(a)20	(a)20	10
	San Joaquin River Delta							
Antioch	(a)100	(a)100	(a)100	100	(a)100		100	(a)10
Opposite Central Landing	(a)20	(a)20	20	20	(a)20	(a)20	20	(a)10
Dutch Slough	20	(a)20	20	20	(a)20	(a)30	20	(a)10
Orwood Bridge	(a)20	30	20	20	(b)20	20	20	(a)10
East Contra Costa I. D.	(a)20	30	30	30	(b)30	20	10	(a)10
Victoria	(b)20	20	20	20		20	20	(b)10
Clifton Court Ferry								
Empire Bridge	(b)30	20	20	20	(b)20	(a)30	30	(b)20
Turner Cut	(a)20	20	20	20	(a)20	20	20	
Stockton Country Club			20	(d)30	(b)20	(bd)20		(ab)20
Garwood Bridge	(a)20	20	20	20	(a)20	20	10	(a)10
Williams Bridge						20	20	
Grant Line bridge	20	(a)20	(a)20	20	bkn	(a)20	(a)10	10
Mossdale	(a)20	20	20	20	20	20	(a)20	(a)60
Vernalis	(b)20	(b)20	20	(e)20	(e)30	(f)20	(b)10	(e)10

(s) Presumed.
 (a) Taken at Low High Tide.
 (b) Taken on following day.
 (d) Taken over one hour off scheduled time.

(e) Taken on preceding day.
 (f) Taken two days earlier.

TABLE 2.5
 SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPFR BAYS
 Samples taken by local observers approximately one and one-half hours after high high tide.
 Salinity expressed in parts of chlorids per million parts of water.

Station	June - 1952							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Point Orient	6600	10000	10500	9800	(a)9900	11000	10600	8500
Point Pinole					(a)7900			
Point Davis	2400	(a)2600	(b)1800	3300	(a)5800	2500	2900	bkn
Grand View	2100	(a)2500	2500	5300	(a)4700	4900	6300	5600
Crockett	1900	(a)800	(a)650	2750			2600	5300
Benicia	(b)1400	1900	700	2300	4000	1500	800	3600
Martinez	80	500	500	190	(e)560	580	680	2000
West Suisun		200	100	60	60	30	190	2500
Innisfaul Ferry		1000	200	20	(b)790	20	bkn	1540
Port Chicago	(a)10	(a)500	(a)10	10	(a)10	(a)10	(a)10	10
O & A Ferry	(a)200	(a)300	(a)10	(a)60	(a)10	(a)20	20	(a)10
Pittsburg								
	Sacramento River Delta							
Collinsville	(a)10	(a)20	(a)10			(a)10		(a)10
Three Mile Slough	(b)10	20		(b)10	10	10	10	(b)10
Rio Vista Bridge	(b)20	10	10	(a)10	10	(a)10	10	(b)10
Isleton	(b)10	10	(a)20	(a)10	10	(a)10	10	(b)10
	Mokelumne River Delta							
Terminus	10	20	(a)10	10	(a)10	(a)10	(a)10	30
	San Joaquin River Delta							
Antioch	(a)10	(a)100	200	10	10	(a)10	10	(a)10
Opposite Central Landing	(a)10	(a)10	10	(a)10	(a)10	10	10	(a)10
Dutch Slough	(a)10	(a)20	20	(a)10	(a)10	10	10	(a)20
Orwood Bridge	(b)10	20	30	(a)10	10	10	10	(b)10
East Contra Costa I. D.	(a)20	20	30	(a)10	10	10	(b)10	(a)30
Victoria	(b)10	20	30	(b)10	10	10	10	(a)30
Clifton Court Ferry								
Empire Bridge	(a)20	30	10	(b)20	20	10	20	30
Turner Cut	(a)20	(a)20	20	(a)10	(a)10	10	20	(a)20
Stockton Country Club		(b)10	10	(a)10	(a)10	10	10	(b)20
Garwood Bridge	(a)10	10	30	(a)10	10	10	10	(a)20
Williams Bridge	(a)10	30		(a)10	10	10	10	(a)20
Grant Line Bridge	10	(a)20	10	10	(a)10	(a)10	(a)10	(a)30
Mossdale	(a)10	20	10	(a)10	10	10	10	(a)20
Vernalis		(b)10	20	(a)10	(e)10	(c)10	(c)20	(b)30
	July - 1952							
	San Francisco, San Pablo and Suisun Bays							
Point Orient	11100	13700	14100	12700	(e)13500	14000	14400	
Point Pinole	(a)7900							
Point Davis	6600	8100						
Grand View		6400	7200	6600	(e)8400	8100	8400	8500
Crockett	7900			6800		7300	7300	
Benicia	4500	5800	bkn	5700		6100	(a)4800	8400
Martinez	4900	5200	3100	3000	(e)3600	4700	2500	7000
West Suisun	(b)4350		1500	4600	4700	3600		
Innisfaul Ferry								
Port Chicago	(b)3500	(a)2800	1200	(e)2400	(a)3500	2500	(a)1900	4600
O & A Ferry	(a)36	(a)12	(a)60	179	394	470	(a)136	823
Pittsburg	12	100	(a)24			(a)74	(a)66	
	Sacramento River Delta							
Collinsville		(a)9	15	(a)10		(a)27	(a)32	(a)31
Three Mile Slough	(b)7	8	9	(b)8	11	15	15	13
Rio Vista Bridge	(b)6	19	13	(b)9	7	15	10	(b)15
Isleton	(b)10	9	8	(b)8	9	12	12	(b)12
	Mokelumne River Delta							
Terminus	14	15	(a)14	16	13	8	9	15
	San Joaquin River Delta							
Antioch	(a)11	(a)13	19	(a)16	(a)21	27	(a)35	(a)30
Opposite Central Landing	(a)7	(a)15	10	(a)16	(a)19	17	(a)14	(a)15
Dutch Slough	(a)15	(a)15	19	(a)23	(a)23	(a)24	(a)24	(a)24
Orwood Bridge	(b)23	32	51	(a)58	61	57	(a)57	(a)52
East Contra Costa I. D.	(a)26	(b)55	62	(a)74	68	70	73	72
Victoria	(e)31		(ab)68	(b)66	65	65	(b)67	(b)55
Clifton Court Ferry								
Turner Cut	(a)23	26	46		(a)46	56	(a)59	(a)64
Empire Bridge		(a)35	32	(a)29	33	46	47	29
Stockton Country Club	(b)23	44	57	(bd)63	(d)68	(*)71	(*)85	(a)86
Garwood Bridge	(b)43	59	53	(a)70	73	87	93	108
Williams Bridge	(a)40		62	(ab)66	(ab)82	(a)116	(ab)107	(a)105
Grant Line Bridge	(a)36	57	75	(a)65	73	95	(a)104	(a)114
Mossdale	(a)39	64	64	(a)64	77	104	(a)56	(a)108
Vernalis	(e)30	(e)67	(e)67	(b)66	(b)87	92	112	(e)102

(*) Presumed.
 (a) Taken at Low High Tide.
 (b) Taken on following day.

(c) Taken two days later.
 (d) Taken over one hour off scheduled time.
 (e) Taken on preceding day.

TABLE 215
 SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours after high high tide.
 Salinity expressed in parts of chloride per million parts of water.

Station	August - 1952							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Point Orient	(e)14800	15200	15700	15600	15700	(a)15200	(a)15000	15300
Point Pinole								
Point Davis								
Grand View	(*)3600	9100	8900	10300	10600	11000	(b)11200	11200
Crockett				9500	(a)9400	(a)12500	(c)10900	
Benicia	8400	9300	7800	(*)8800		8600	8300	9500
Martinez	(e)6300	6400	7000	6400	(a)4200	6100	6800	6800
West Suisun						5600	7100	7600
Innisfail Ferry								
Port Chicago	(*)5500	5800	4000	5500	5800	(a)5000	6700	6400
O & A Ferry	1900	1200	1600	(a)900	(a)1090	(a)1030	1200	1200
Pittsburg	201	(a)312	(a)232	(a)408	(a)470	(a)370	(a)360	
	Sacramento River Delta							
Collinsville		657	(a)346	(a)221	(a)300	480	(a)250	
Toland Landings**		(a)30	(a)15		(a)15			
Three Mile Slough	19	(a)14		(*)16	(a)23		18	(a)26
Rio Vista Bridge	11	12	12	(b)12	13	2 1/2	14	(b)14
Isleton	11	28	10	(b)10	13	4	13	(b)13
	Mokelumne River Delta							
Terminus***	30	(a)18	32					
	San Joaquin River Delta							
Antioch	(a)44	(a)194	286	(a)109	(a)182	255	146	(a)200
Millers Harbor**		(a)30	(a)37	(b)56	(a)62	63	59	(a)153
Jersey Island**			(a)29	(a)29	(a)32	(a)53		(a)38
Three Mile Slough**		(a)18		(a)13	15	(a)30		
Culton Point**				(a)22	(a)21	(a)23	bkm	(a)23
San Andreas**			(a)29	(a)26	(a)20	(a)22	(a)25	(a)22
Opposite Central Landing	(a)17	29	(a)16	(a)19	(a)42	19	(a)17	(a)16
Dutch Slough	(a)24	24	(a)20	(a)27	(a)31	(a)31	(a)32	(a)34
Piper Slough**		21	(a)22	(a)24	26	(a)31	(a)27	(a)27
Webb Ferry**		26	23	(a)21	23	41	25	(a)25
Webb Pump**		(b)24	(a)22	(a)22	(c)35	25	(a)26	(a)27
Webb Point (Hdos.)**		(b)20	(a)23	(a)21	(ac)23	22	(a)22	(a)23
Holland Tract**		(c)30	(ac)30	(c)24	(c)25		(ae)25	(e)26
Orwood Bridge**		40	(a)39					
East Contra Costa I. D.	67	61	83	(a)83	58	65	63	(a)52
Victoria	63	62		(b)39	37	44	37	(b)45
Clifton Court Ferry								
Empire Bridge**								
Turner Cut**	56	47	62					
Stockton Country Club**	(b)89	92	98					
Garwood Bridge**	105	102	(a)100					
Williams Bridge**	(a)89	97						
Grant Line Bridge	(a)114	105	(a)111	(a)115	107	109	121	(a)114
Mossdale	(a)99	97	103	(a)114	(a)104	109	(a)106	(a)103
Vernalis		(b)118		(b)108	(b)104	(b)110	(b)100	112

(*) Presumed.
 (**) Station established during the year.
 (***) Station discontinued during the year.
 (a) Taken at Low High Tide.
 (b) Taken on following day.
 (c) Taken two days later.
 (d) Taken over one hour off scheduled time.
 (e) Taken on preceding day.

TABLE 215

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide.
Salinity expressed in parts of chloride per million parts of water.

Station	September - 1952							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	15500	15100	16000	(a)15140	15370	15380	15500	(a)16000
Point Pinole	(a)13500		(a)13250				11600	(a)11100
Point Davis							11800	11700
Grand View	11200		11720	(a)12100	12080	11710	11800	(a)10100
Crockett		13200			12280	10030		
Benicia	10400	8900	8275	(a)9650	8260	7940	8300	9200
Martinez	7600	5800	8375	(a)6130	5680	5740	7600	(e)6300
West Suisun		6175	5800	5060	6070	6400	7500	
Innisfall Ferry		2000	2275		2248	2150	2100	(a)2000
Port Chicago	(a)5400	5830	4875	(a)5355	4100	4130	5700	5000
O & A Ferry	2000	1360	1475	(a)1520	975	(a)498	(a)700	1100
Pittsburg	(a)530	910			551		355	(a)198
Sacramento River Delta								
Collinsville		(a)750	700		500	(a)195	397	(a)101
Toland Landing			(a)29					
Three Mile Slough	(d)23	23	175	30	(ad)31	27	(a)32	26
Rio Vista Bridge	13	14	175	21	23	24	bkn	24
Isleton	13	14	125	22	24	23	23	21
San Joaquin River Delta								
Antioch	(a)200	354	(a)244	(a)162	180	152	(a)84	(a)98
Millers Harbor	(a)73	(a)220	(ab)275	(a)64	117	(a)47	(a)37	(a)36
Jersey Island		(a)83	(ab)225		38	(a)35		(a)35
Three Mile Slough	(a)29	(a)29		(a)34	(d)28	(a)27	26	(a)30
Oulton Point	(a)27	(a)27		(a)34	35	(a)33	(a)32	(a)30
San Andreas	(a)22	24	(a)150	(a)32	(a)29	(a)32	(a)28	(a)26
Opposite Central Landing	(a)18	(a)25	(a)175	(a)23	23	(a)23	(a)22	(a)20
Dutch Slough	(a)36	(a)40	(a)250	(a)45	45	(a)44	(a)46	(a)44
Piper Slough	(a)27	(a)28	(a)30	(a)40	43	(a)38	(a)35	(a)36
Webb Ferry		49	39	35	(a)32	36		
Webb Pump	(a)32	33	(bd)41	(a)35	(a)36	(a)34	(a)36	(a)41
Webb Point (Headquarters)	(a)24	24	(bd)39	(a)31	(a)32	(a)33	(a)33	(a)31
Holland Tract	34	(a)29	40	(a)41	37	(a)42	41	(a)42
East Contra Costa I. D.	67	(a)65	(b)82	(a)98	(a)132	(ab)137	133	
Victoria	65	(a)52	(a)74	83	111	111	(b)105	100
Clifton Court Ferry								
Grant Line Bridge	(a)112	(a)100	(a)114	109	(a)96	(a)74	(a)100	99
Mossdale	96	(a)108	(a)107	100	(a)71	(a)81	(a)99	104
Vernalis	107	108			(c)75	(b)85	(b)102	121
October - 1952								
San Francisco, San Pablo and Suisun Bays								
Point Orient	16500	16700	14400	14800	15200	15300	14800	16500
Point Pinole				13300		11800		
Point Davis	12100		(a)11500	10700	11100	11800	11600	(a)12700
Grand View	11700	11600	(b)11700	10700		11800	11600	11600
Crockett	12000	12000		11400	11800	12400	10900	(a)10500
Benicia	7500		6900	(sa)9500		9200	8100	9400
Martinez	6800	6400	(b)5900	5500	6400	7400	6100	6100
West Suisun		6800	6200			7900	6300	
Innisfall Ferry	1900	2100	(b)2000	1900	2100	2100	2000	2100
Port Chicago	4600	5500	(a)3600	4100	5200	6600	4800	5700
O & A Ferry	1100	(a)800	1000	(a)600	(a)700	(a)600	900	(a)1100
Pittsburg		380	(a)310	160	(b)300	(a)400	300	600
Sacramento River Delta								
Collinsville	291	642	370		394		(a)278	472
Toland Landing	bkn							
Three Mile Slough	28	24	(a)10	16	20	24	20	bkn
Rio Vista Bridge	24	19	10	20	18	19	14	18
Isleton	23	18	10	14	11	16	15	15
San Joaquin River Delta								
Antioch	(a)161	(ab)142	120	80	125	165	147	141
Millers Harbor	41	41	36	32	80	(a)63	(a)67	38
Jersey Island		(a)34	(a)28			(a)33		
Three Mile Slough	(a)29	(a)24	(a)20	(a)20	(a)26	38		(a)33
Oulton Point		(a)33	(a)24	29	29	(a)27	(b)28	(b)31
San Andreas		(a)26	(a)28	24	25	(a)31	32	32
Opposite Central Landing	22	(a)16	(a)16	12	17	(a)17	(a)13	17
Dutch Slough	41	(a)39	(a)40	40	41	(a)43	(a)44	49
Piper Slough	(a)38	39	32	28	37	(a)43	(a)37	42
Webb Ferry			24	24	28	31	33	33
Webb Pump	33	(a)33		32	(a)35			
Webb Point (Headquarters)	31	(a)32		24	(a)32			
Holland Tract	(c)42			(a)44	(a)52			
East Contra Costa I. D.	125		(ar)44	(e)44	(a)55	48	(a)59	57
Victoria	92	129	(b)128	152	118	(a)127	(a)143	(b)122
Clifton Court Ferry		96	(a)88	105	89	88	(b)79	96
Grant Line Bridge	(a)104	114	bkn	76	(a)78	(a)81	(a)114	(a)113
Mossdale	(a)117	(a)122	(a)76	(a)68	(a)78	(a)94	(a)105	(a)111
Vernalis	(b)106	(b)119	(b)76	76	74	(e)87	(e)106	(d)109

(e) Presumed.
 (a) Taken at Low High Tide.
 (b) Taken on following day.
 (c) Taken two days later.
 (d) Taken over one hour off scheduled time.
 (e) Taken on preceding day.
 (f) Taken two days earlier.

n = Antioch

TABLE 215

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide.
Salinity expressed in parts of chloride per million parts of water.

Station	November - 1952							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Point Orient	15000	14400	14800	14800	14900	14200	14500	bkn
Point Pinole					12600			
Point Davis					10700		11200	
Grand View	bkn	11500			10200	10200		10200
Crockett	12800	10900	(a)9900	(a)11300	9500		(b)11100	
Benicia	7500	8600						
Martinez	7800	8900	8200	7900	6300	5300	bkn	7800
West Suisun								6600
Innisfall Ferry	2100	4200	2100	2200	2500	2300	2300	2300
Port Chicago	(a)6400	4800	(a)4700	6900	5000		4900	5700
O & A Ferry	(a)1000	(a)2800	1014	1800	1100	(a)670	1000	2700
Pittsburg	900		400	400	500	(a)229	200	1200
	Sacramento River Delta							
Collinsville	567	608	303		(b)333	223		783
Toland Landing								
Three Mile Slough	21		20	19	20	11	16	18
Rio Vista Bridge	16	14	15	13	14	18	18	12
Isleton	19	13	14	11	13	34	9	11
	San Joaquin River Delta							
Antioch	223	278	113	228	146	141	96	234
Millers Harbor	(a)40	38	(ab)39		37	39	35	47
Jersey Island			31	39				50
Three Mile Slough		28	28	(a)28	26	32	36	(a)16
Oulton Point	36	(ab)27	38	27	29		35	27
San Andreas	31	(a)34	33	29	29		36	40
Opposite Central Landing	(a)18	(a)16	21	24	(a)13	(a)18	18	15
Dutch Slough	48	(a)51	(a)53	47	53	(a)57	(a)51	49
Piper Slough	40	(a)47	41	44	39	(a)49	42	76
Webb Ferry	36	33	29		31		(b)36	34
Webb Pump								
Webb Point (Headquarters)								
Holland Tract	(ab)61	(ab)58	(b)58	(ab)84	(b)59		78	60
East Contra Costa I. D.	(a)123	(a)127	123	(b)124	(a)133	(a)131	131	(a)134
Victoria	110							
Clifton Court Ferry		(a)112	102	108	(a)98			
Grant Line Bridge	(a)111	bkn	106	104	(a)90	(a)71	58	(a)62
Moasdale	(a)110	(a)110	114	(a)95	(a)90	(a)61	(a)61	(a)65
Vernalis	105	(r)120	(r)97		(a)90	(a)55	(r)55	(r)62
	December - 1952							
	San Francisco, San Pablo and Suisun Bays							
Point Orient	14100	14600	10700	10600	12600	12300	11400	11500
Point Pinole			7300		9900			9000
Point Davis				8700	7500	4400	8400	6800
Grand View	9600	9500	7000	5800	6000	4700	4500	4400
Crockett	11700	8900	6200	7000	6600	(a)3300	4500	4400
Benicia			4300	4000	4600	2100	4600	5500
Martinez	7400	(f)7800	3600	4800	2600	900	4600	3700
West Suisun	6500	3600	1800	1800	1400		bkn	2800
Innisfall Ferry	2300	2200	(b)1800	(r)1200	113	1000	1600	730
Port Chicago	6100	4300	1500		1200	(a)176	800	358
O & A Ferry	1300	(a)207	66	79	74		1940	639
Pittsburg	(b)300		70	34	(b)37	44	42	44
	Sacramento River Delta							
Collinsville	714	(a)74	40		18	29	22	22
Toland Landing								
Three Mile Slough	25	23	17	12	20	24	22	17
Rio Vista Bridge	14	10	14	12	26	16	15	13
Isleton	11	20	23	12	16	11	21	9
	San Joaquin River Delta							
Antioch	246	134	52	37	36	(a)54	40	39
Millers Harbor	64	51	49	53	52	52	52	51
Jersey Island	60	(a)50	51		47		44	47
Three Mile Slough		44	46	(a)22	(a)30	42	44	(a)25
Oulton Point	(a)37	(a)41	39	34	(a)35	35	35	38
San Andreas	39	(a)38		35	36	34	41	34
Opposite Central Landing	(a)19	(a)14	22	24	(a)15	33	23	27
Dutch Slough	54	(a)66	88	76	67	82	72	70
Piper Slough	47	(a)63	70	50	(a)61	62	49	66
Webb Ferry	40	39	42	41	45	38	(a)45	(a)48
Webb Point (Headquarters)								
Holland Tract		(a)74	72	69	68	84		
East Contra Costa I. D.	(ab)114	(a)115	(b)121	121	(a)115	(b)142	145	(a)129
Victoria								
Clifton Court Ferry	(a)70	(a)71	72	(a)63	(a)55		46	
Grant Line Bridge	(a)64							
Moasdale	(a)65	(a)67	64	(a)50	(a)53	(a)39	(a)34	(a)35
Vernalis	63	(a)66	(a)51	(b)48	(a)51	28	32	36

(ee) Station discontinued during the month.
(e) Presumed.
(a) Taken at Low High Tide.
(b) Taken on following day.

(c) Taken two days later.
(d) Taken over one hour off scheduled time.
(e) Taken on preceding day.
(f) Taken two days earlier.

TABLE 211

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide
Salinity expressed in parts of chloride per million parts of water.

Station	January - 1953							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo, and Suisun Bays							
Point Orient	10200		7800	8800	6000	6300	8200	7800
Point Pinole	2200	6400	2400	(b)1300		700	1400	1600
Point Davis	2000	2000	2300	2700		1300	1600	
Grand View	2300	(a)2700	3400	900	188	(*)800	200	1200
Crockett			1100	300	32	222	400	400
Benicia	500	2100	800	48	(d)28	31	200	600
Martinez	72	1500	172	52	48	27	(c)28	47
West Suisun		796	548	304	(a)180	124		204
Innisfail Ferry	(a)56	(a)1104	48	20	(a)24	32	40	29
Port Chicago	28		24	8	20	32	18	20
O & A Ferry	(b)43	40	44	(b)28	20	32	27	(a)28
Pittsburg								
	Sacramento River Delta							
Collinsville		24	16	(*)12		11	22	14
Toland Landing								
Threemile Slough Bridge	12	13	11	7	8	7	6	8
Rio Vista Bridge	12	11	17	7	12	12	8	8
Isleton Bridge	10	10	10	7	8	6	8	5
	San Joaquin River Delta							
Antioch	43	45	45	37	36	32	27	29
Millers Harbor	(a)54	49	52	53	53	48	40	(b)38
Jersey Island	(a)24	46	46	35	32		(*)36	(a)32
Threemile Slough	(a)30	26	(a)32	26	25	13	19	
Oulton Point	(a)43	43	(b)32	28	(a)40	19	15	(a)20
San Andreas Landing	22	32	34	25	(a)30	17	22	19
Opp. Central Landing	(a)26	16	14	14	(a)7	9	9	(a)8
Dutch Slough	(a)77	(a)78	79	(a)69	(a)66	69	68	61
Piper Slough	(a)61	58	61	55	(a)59	57	59	(a)53
Webb Ferry	43	(a)40	39	34	34	(b)32	(e)32	(a)31
Holland Tract	(a)67	65	60	68	63	64	56	(a)59
East Contra Costa I. D.	(a)112	110	118	116	103	(b)89	74	(a)83
Clifton Court Ferry		53						
Mossdale Bridge	(a)43	40	(a)42	(a)35	(a)33	36	(a)40	(a)39
Vernalis	(d)29	(e)35	(de)42	(dr)37	(b)28			(d)38
	February - 1953							
	San Francisco, San Pablo, and Suisun Bays							
Point Orient	7900	9000	13300	13100	12400	10800	14100	
Point Pinole			8900					
Point Davis	3600	2400	7300	7100	6900	7400		
Grand View	1200	1800	3800	4600	5000	5900	6100	
Crockett		1900		6900	6500	8400	8900	
Benicia			(*)2500	4200	1000		6200	
Martinez	300	2504	2600	2100	800	6100	5400	
West Suisun	33	396	936	2100	1000	2400		
Innisfail Ferry	(a)184	180	244	400	500	400		
Port Chicago	23	132	836	(*)926	(a)500	1900	(a)2800	
O & A Ferry	(a)24	31	29	36	(b)29	(b)192	284	
Pittsburg		33	(c)33	28	26		32	
	Sacramento River Delta							
Collinsville	11	15	35		16	20	18	
Toland Landing								
Threemile Slough Bridge	8	16	13	14	12	12	36	
Rio Vista Bridge	15	(a)13	11	14	16	14	20	
Isleton Bridge	8	11	9	9	9	16	14	
	San Joaquin River Delta							
Antioch	30	30	26	26	32	27	30	
Millers Harbor	40	38	41	37	35	32	(a)37	
Jersey Island	27	32	37					
Threemile Slough	11	28	(a)25	(a)28	25	27	29	
Oulton Point	(a)22	40	28	(a)30	(a)26	41	31	
San Andreas Landing	23	28		26	26	25	44	
Opp. Central Landing	11	12	15	(a)12	12	32	16	
Dutch Slough	56	59	58	(a)51	43	47	48	
Piper Slough	57	46	(b)38	(ab)43	46	35	(ab)44	
Webb Ferry	29	31	(a)34	(a)31	31	31	30	
Holland Tract		50	48		48		47	
East Contra Costa I. D.	77	82	86	(a)100	(b)97	106	114	
Clifton Court Ferry								
Mossdale Bridge	38	44	(a)65	(a)78	95	70	(a)71	
Vernalis		(d)47	(d)70	(ae)69	(de)122	(do)73	(ac)66	

(*) Presumed.
(a) Taken on Low High Tide.
(b) Taken on following day.
(c) Taken two days later.

(d) Taken over one hour off scheduled time.
(e) Taken on preceding day.
(f) Taken two days earlier.

TABLE 211

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Sample taken by local observers approximately one and one-half hours after high high tide
Salinity expressed in parts of chloride per million parts of water

Station	March - 1953							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Orient	13600	12200	13900	(b)14400	(*)14200	12700	12100	13400
Point Pinole							8900	(*)19500
Point Davis	7450	7000		8500	8800			
Grand View	7130	8100	8100	8600	8700		9000	9000
Crockett	(a)7930	8820		8600	8400	(ab)5200	5900	(b)8300
Benicia		6200	(a)7700	6100	5500	2300	3100	
Martinez	2600	6200	7100	3200	4600	1200	1400	2100
West Suisun	(a)2230	3200		4000	2600	1000	1400	1000
Innisfall Ferry	600	600	800	905	700	600	700	(a)700
Port Chicago	2100	3400	(c)5850	2200	2400	600	330	600
O & A Ferry	119	(b)254	1100	340	(a)163	23	25	(a)20
Pittsburg	(a)36	35	178	176	(b)64		27	(a)20
Sacramento River Delta								
Collinsville		25	55	24	18	24	15	(a)12
Toland Landing								
Threemile Slough Bridge	25	13	22	24	15	24	14	16
Rio Vista Bridge	15	15	15	17	15	12	13	13
Isleton Bridge	14	29	11	21	11	10	24	12
San Joaquin River Delta								
Antioch	(a)33	32	60	(a)57	50	35	30	27
Millers Harbor	(a)38	37	36	40	(a)36	32	bkm	31
Jersey Island								(a)31
Threemile Slough	28	26	23	22	20	49	18	(a)16
Culton Point	(a)31	(b)26	51	25		23	(a)23	(a)20
San Andreas Landing	(a)28	30	29	25	(a)22	24	22	(a)18
Opp. Central Landing	17	34	15	22	11	14	12	(a)10
Dutch Slough	48	44	43	(a)50	48	47	53	42
Piper Slough	44	41	41	40	42	37	(b)39	35
Webb Ferry	38	32	bkm	27	36	28	26	27
Holland Tract	(b)53	34	(a)55	48	46	77	45	45
East Contra Costa I. D.	21	133	(b)111	(a)118	135	129	142	129
Clifton Court Ferry								
Mossdale Bridge	100	124	(a)168	162	149	116	(a)147	178
Vernalis	(b)126	(d)109		(d)164	(e)167	(de)122	(bd)162	(bd)205
April - 1953								
San Francisco, San Pablo, and Suisun Bays								
Point Orient		12700	(e)11600	13800	13300	(e)12900	(e)14300	12100
Point Pinole			bkm	(a)9400				
Point Davis		6300	8100	(*)5700	7800	(b)10300	(a)7300	
Grand View	9100	8600	9200	8500	8800	(e)8800	8700	7400
Crockett	6400	(a)5200	6100	8800	8200		(b)8200	(e)5500
Benicia	(e)4300		3600	5500	5500	(e)5500	5100	2100
Martinez	2800	3600	(a)2100	4500	4200	(a)4800	(a)2700	400
West Suisun	2300		2100	1400	2800	3400	3200	
Innisfall Ferry	(a)600	600	(a)700	(a)300	500	(a)500	(a)300	(a)372
Port Chicago	1500	1000	1200	2500	(a)2400	(ae)3000	1600	64
O & A Ferry	(a)20	20	(a)28	(a)36	(b)115	(a)80	(a)28	(a)16
Pittsburg	(a)21	19	(ab)17	(ab)39	(b)47	(a)28	(ab)24	(a)16
Sacramento River Delta								
Collinsville	(a)13	14	8	a11	13	(a)16		8
Toland Landing								
Threemile Slough Bridge	12	9	16		12	(a)12	16	16
Rio Vista Bridge	10	12	9	12	13	16	8	4
Isleton Bridge	8	16	10	(*)8	21	8	16	8
San Joaquin River Delta								
Antioch	20	17	(a)20	(a)22	23	(a)20	(a)32	24
Millers Harbor	30	25	(a)25	22	19	(a)20	(a)28	24
Jersey Island								
Threemile Slough	(a)33	17	(a)19	(a)17	19	(a)24	(a)16	(a)16
Culton Point	19		(a)19	22	14	(a)20		
San Andreas Landing	(a)18	18	(a)16	(a)18	12	(a)16		(a)28
Opp. Central Landing	14	17	(a)12	13	8	(a)4	(a)16	12
Dutch Slough	40	35	(a)38	28	38	(a)32	(a)48	
Piper Slough	25	23	(a)26	24	22	(a)24		
Webb Ferry	33	21	23	25	18	28	36	20
Holland Tract		32	(a)29	28		(a)24	(a)24	
East Contra Costa I. D.	116	116	91	77	70	72	(a)92	92
Clifton Court Ferry								108
Mossdale Bridge	194	177	168	117	138	(a)124	104	24
Vernalis		(b)192		(d)137	(e)152	(ae)136	(df)84	(dr)52

(*) Presumed.
(a) Taken at Low High Tide.
(b) Taken on following day.
(c) Taken two days later.

(d) Taken over one hour off scheduled time.
(e) Taken on preceding day.
(f) Taken two days earlier.

TABLE 211

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide.
Salinity expressed in parts of chloride per million parts of water.

Station	May - 1953							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo, and Suisun Bays							
Point Orient	11900	12500		14100	13200	(e)10900 (a)7400	(e)11000	(b)9200
Point Pinole		8600			5400		6200	5700
Point Davis	3000	5700	(e)4700		8400	(e)8800	8500	8900
Grand View	8700	8300	7800	8600	6400		6100	5200
Crockett		5400	(a)3600		2300	(e)4060	4900	4100
Benicia	800	1100	3700	5900	2300	(e)1970	(a)410	4000
Martinez	600	1400	710	3100	2300	(ae)390	(a)190	1660
West Suisun	52		630	2440	1400	(a)180	1240	1080
Innisfail Ferry	400	300	(a)220	(a)190	152	(a)16	(a)16	(ab)16
Port Chicago	16	260	60	2140	640			
O & A Ferry	(ab)16	12	(a)24	(a)36	20	(ab)20	(a)16	
Pittsburg	(a)16	20	(a)16	(b)20	20		(a)16	
	Sacramento River Delta							
Collinsville	16	12	(a)12	(a)12	16	(a)8	(a)8	12
Toland Landing								12
Threemile Slough Bridge	12	12	8	10	8	12	8	12
Rio Vista Bridge	8	12	8	8	8	10	12	12
Isleton Bridge	8	8	4	8	16	8	8	8
	San Joaquin River Delta							
Antioch	20	12	(a)16	20	16	(a)24	(a)20	(a)16
Millers Harbor	28	20	(a)28	(a)24	20	(a)24	(a)20	(a)20
Jersey Island					20			12
Threemile Slough		24	(a)16	14	(ab)16	(a)20	(a)16	(a)12
Oulton Point	12						(a)12	
San Andreas Landing		28	(a)16	22	12	(a)16	(a)12	
Opp. Central Landing	12	12	(a)8	16	8	(a)12	(a)8	12
Dutch Slough	(a)28	32	(a)30	30	28	(a)28	(a)28	24
Piper Slough	28	40	bkm	20	24	(a)28	(a)32	16
Webb Ferry	24	16	82	24	16	24	(e)16	16
Holland Tract	28	36		32	28	(a)24	(a)24	
East Contra Costa I. D.	72	(ab)72	54	52	72	(a)72	(a)72	84
Clifton Court Ferry		32	40	(a)48	56	(a)56	56	72
Mossdale Bridge	36	36	40	100	84	(a)44	64	48
Vernalis	(de)28	(e)36	(df)32	(bd)128		(d)48	56	
	June - 1953							
	San Francisco, San Pablo, and Suisun Bays							
Point Orient	12300	12200	13600	13000	12500	(e)9100 (a)7600	13200	13900
Point Pinole			(a)7300			(e)4700		
Point Davis	5900	7100	5100	5200	7500		9520	6860
Grand View	8500	(bd)8200	8400	8300	6500	(ab)4800	6880	6720
Crockett	(a)4300	7200	5500	4500	6500		9500	2880
Benicia	2500		3600	3800	3400			
Martinez	1600	2700	(a)460	1700	1500	(e)1800	5700	1200
West Suisun	440	3600	1300	700	1900	2730	4200	1860
Innisfail Ferry	132	(a)148	(a)136	124	96	(a)110	(a)110	140
Port Chicago	300	1100	1000	300	268	1564	3680	2340
O & A Ferry	20	(a)28	(a)20	12	(a)12	(a)12	(a)36	(a)43
Pittsburg	(a)16	20	(a)16	(b)20	20	(ab)20	(a)16	
	Sacramento River Delta							
Collinsville	24	(a)12		16	(a)8	(ab)4		12
Toland Landing								32
Threemile Slough Bridge	8	(b)8	8	4	(a)4	4		4
Rio Vista Bridge	12	(b)12	8	8	12	(a*)6	6	4
Isleton Bridge	8	(b)12	16	8	(b)4	4	4	4
	San Joaquin River Delta							
Antioch	16	(a)16	(a)16	16		(a)12	(a)16	20
Millers Harbor	16	(a)20	(a)24	20	bkm	(a)16	(a)24	20
Jersey Island	32		(a)16	(a)16			(a)12	16
Threemile Slough	12	(a)16	(a)12	(a)16	(a)12	(a)16	12	(a)14
Oulton Point	12				(a)12			16
San Andreas Landing	12	(a)16	(a)16	16	(a)12		(a)28	16
Opp. Central Landing	12	(a)12	(a)20	16	(a)8	(a)4	(a)8	10
Dutch Slough	24	(a)24	(a)24	(a)28	(a)16	20	(a)24	24
Piper Slough	20		(a)28	12	(a)24	(a)24	(a)24	28
Webb Ferry	16	16	(a)16	20	(a)8	8	(e)12	16
Holland Tract	20		20	28	(a)20		24	24
East Contra Costa I. D.	(ab)64	60	(a)64	(b)56	(ab)104	(a)68	48	42
Clifton Court Ferry	68	60	(a)32	36	(a)36	(a)8	32	24
Mossdale Bridge	52	(a)40	32	36	(a)20	(a)12	32	28
Vernalis		(de)44	(de)32	(de)44	(df)32	(ab)12		

(*) Presumed.
(a) Taken at Low High Tide.
(b) Taken on following day.
(c) Taken two days later.

(d) Taken over one hour off scheduled time.
(e) Taken on preceding day.
(f) Taken two days earlier.

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide.
Salinity expressed in parts of chloride per million parts of water.

Station	July - 1953							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo, and Suisun Bays							
Point Orient			13960					
Point Pinole								
Point Davis	(e) 3520		10360	10400	11040	(e) 12100		(a) 12200
Grand View	7420		7600	8080	(d) 8940	(a) 9000	8660	9360
Crockett	6260	(a) 7200	7920		10060	(ae) 10240	11700	11260
Benicia			8280	6880	7680	(e) 9460	10100	9240
Martinez	2340	3800	(a) 2740	5800	6580	(a) 5340	(a) 6140	7460
West Suisun	3340	4600	4880	4980		9060	7600	7240
Innisfail Ferry	124	(a) 140	(a) 216	472	(a) 508	(a) 616	(a) 1740	(a) 2260
Port Chicago	1044	4320	4420	4080	5540	7640	6620	
O & A Ferry	(a) 76	(a) 100	(a) 292	(a) 692	(a) 532	1276	(a) 1550	(a) 2120
Pittsburg	26		(a) 104	228	(a) 304		(a) 932	(a) 1090
	Sacramento River Delta							
Collinsville	28	(a) 12		100	(a) 208	(a) 492	(a) 892	(a) 1240
Toland Landing	8							
Threemile Slough Bridge	8	24	8	12	16	20	(a) 24	28
Rio Vista Bridge	4	4	20	8	12	20	12	10
Isleton Bridge	12	8	8	8	(b) 8	8	10	10
	San Joaquin River Delta							
Antioch	(a) 16	(a) 20	(a) 36	96	168	(a) 152	740	(a) 588
Millers Harbor	(a) 20	20	(a) 20	20	(a) 24	(a) 48	(a) 64	88
Jersey Island	(a) 24		(a) 16	20		(a) 24		(a) 84
Threemile Slough	(a) 12	(a) 8	(a) 20			(a) 28	(a) 20	(a) 28
Oulton Point				12	(a) 12		(a) 14	(a) 20
San Andreas Landing	(a) 16	(a) 20	(a) 12	(a) 12	(a) 12	(a) 16	(a) 16	(a) 14
Opp. Central Landing	(a) 3	(a) 12	(a) 6	8	(a) 12	(a) 12	10	(a) 28
Dutch Slough	(a) 24	(a) 40	20	24	20	(a) 24	32	(a) 28
Piper Slough	(a) 30	(a) 16	16	16		(a) 16	14	(a) 20
Webb Ferry	10	(a) 20	16	16	16		36	36
Holland Tract	(a) 24	(a) 28	(a) 20	20		(a) 20	(a) 14	24
East Contra Costa I. D.	(a) 24	52	48	44	(a) 36	(a) 36	40	(a) 20
Clifton Court Ferry			44	56			20	(a) 28
Mossdale Bridge	(a) 20	32	36	64	(a) 140		152	(a) 144
Vernalis	(a) 24	(a) 40	44	(d) 80	(d) 128	(d) 132	(df) 156	(b) 136
	August - 1953							
	San Francisco, San Pablo, and Suisun Bays							
Point Orient					16800	(e) 16700	16900	16700
Point Pinole	(b) 1140	13200	11540	13200	13600	13800	13700	14200
Point Davis		(e) 10120	11100	11700	12800	(e) 12900	13800	13900
Grand View		11700			14100		(a) 14300	13810
Crockett		(f) 9640	8780	10600	10000		9120	11400
Benicia	8780				(*) 10500		(a) 9980	(a) 7300
Martinez	8500	8460	(a) 6920	8200	9940	(a) 6900	7960	
West Suisun	6860		8120	8200		(a) 3410	(a) 4160	(a) 4080
Innisfail Ferry	(a) 2060	(a) 2660	(a) 1960	(a) 3200	(a) 3080	(a) 3410	(a) 4160	(a) 4080
Port Chicago	8000	8100	8060	7400	(*) 7952	8530	7890	8940
O & A Ferry	(a) 2130	3040	3640				(a) 3140	(ab) 3180
Pittsburg		(ab) 1160	(a) 1520	1440	(b) 1740	(ab) 1450	(a) 1510	2180
	Sacramento River Delta							
Collinsville	(a) 920	(a) 1530	(a) 2020	2200	1990	(a) 1150	1570	
Toland Landing								
Threemile Slough Bridge	(b) 43	80	64	(f) 48	(b) 40	124	69	155
Rio Vista Bridge	(b) 10	(a) 12	12	(a) 16	(b) 16	24	16	16
Isleton Bridge	(b) 14	12	(a) 12	16	(b) 16	12	20	16
	San Joaquin River Delta							
Antioch	1090	(a) 624	1170	1090	(a) 492	(a) 668	1350	1440
Millers Harbor	(a) 124	(a) 180	252	256	(a) 288	(b) 360	359	(a) 355
Jersey Island	(a) 72	(a) 72		140	(a) 64	(a) 163	(a) 155	486
Threemile Slough	(a) 23	(a) 72	(a) 60	(a) 52	(a) 36	72	65	(a) 33
Oulton Point			(a) 40		(a) 32	(a) 36	65	(a) 37
San Andreas Landing	(a) 16	(a) 24	(a) 20	(a) 20	(a) 32	(a) 61	(a) 20	24
Opp. Central Landing	(a) 14	(a) 16	-- 16	(a) 44	(a) 16	(a) 16	12	(a) 12
Dutch Slough	(a) 32	(a) 32	64	104	(a) 68	(a) 72	86	(a) 78
Piper Slough	(ab) 44	(b) 48	40	36	(a) 65	(a) 37	41	(a) 41
Webb Ferry	40	40	88	(d) 120	48	45	159	69
Holland Tract			(a) 44	(a) 28	(a) 32	(a) 36	33	(a) 33
East Contra Costa I. D.	(a) 20	20	20	(a) 36	(a) 40	44	41	(a) 49
Clifton Court Ferry		24	28	(a) 28	(a) 20	(a) 24		
Mossdale Bridge	(a) 140	128	140	(a) 152	(a) 136	156	151	(a) 155
Vernalis	(dc) 108	(bd) 128	(b) 132	160	(d) 136	(d) 148	(e) 139	(af) 155

(*) Presumed.
(a) Taken at Low High Tide.
(b) Taken on following day.
(c) Taken two days later.

(d) Taken over one hour off scheduled time.
(e) Taken on preceding day.
(f) Taken two days earlier.

TABLE 211

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide.

Salinity expressed in parts of chloride per million parts of water.

Station	September - 1953							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo, and Suisun Bays							
Point Orient	(a)16600	16900	16100	15600	(e)16400	(a)16500	16500	15400
Point Pinole	(e)14400	(a)13300	12200	(e)11500	(ae)13800	13100	13600	
Point Davis		13000	13900	14000	(e)14000	(b)13400	13000	13200
Grand View	(a)12500	13800	13100	(a)11400	(a)11400	11600		(ab)9910
Crockett	(e)12000	11000	9890	(e)10500	(e)10500	8360	9830	(a)8670
Benicia	8300	(a)7360	6900	(a)6670	8510	5200	(a)4490	(a)4650
Martinez		8080		9360	8320	6430		5930
West Suisun	(a)4020	(a)4300	(a)4260	(a)4080	(a)4040	3730	(a)3060	(a)2510
Innisfail Ferry	8570	(b)6900	6240	6650	(e)6920	4060	5610	3940
Port Chicago	(a)3060	(a)2180	2550	(a)1710	(a)1650	1370	1290	551
O & A Ferry	1830		918	1310		310	306	
Pittsburg								
	Sacramento River Delta							
Collinsville	1830		1120	1510	(a)592	355	(a)196	(a)171
Toland Landing								
Threemile Slough Bridge	(a)110	41	33	24	29	20	24	16
Rio Vista Bridge	(e)12	12	24	16	24	(b)16	24	16
Isleton Bridge	(ae)16	16	12	12	16	12	16	12
	San Joaquin River Delta							
Antioch	1200	(a)853	530	571	347	151	200	118
Millers Harbor	(a)298	(a)200	159	(a)86		49	49	(a)333
Jersey Island			114	(a)65				(a)33
Threemile Slough		(a)82	(a)37	(a)37	(a)37	24	24	(a)24
Oulton Point			(a)37	(a)37	(a)20	20	(a)20	
San Andreas Landing	(a)24	(a)24	16	(a)16	(a)24	20		(a)45
Opp. Central Landing	(a)12	(a)12	(a)16	(a)16	(a)16	(f)16	(a)20	(a)12
Dutch Slough	(a)86	(a)114	(a)78	(a)78	(a)57	45	(a)37	(a)37
Piper Slough		45		(a)37	(a)41	37	(a)37	(a)37
Webb Ferry	49	41	78	53	45		33	24
Holland Tract	(a)37		49		(a)37			
East Contra Costa I. D.	33	(a)53	(a)73	(a)49	(a)53	(a)57	(a)65	(a)78
Clifton Court Ferry			(a)49	57	(a)41	(a)61	(ae)122	
Mossdale Bridge	(a)110	151	(a)126	(a)135	(a)139	(a)110	(a)110	(a)94
Vernalis	(ae)110	(af)147	(f)131	126	131	106	(e)110	(e)94
	October - 1953							
	San Francisco, San Pablo, and Suisun Bays							
Point Orient	(e)15300	15000	15400	15100	15500	16600	15700	
Point Pinole		11900	11700	10700	11400	12400		10900
Point Davis		13300	13100	13000	12700	12600	12600	12700
Grand View	(e)13300	11300	11500	10000	(e)11000	12500	11200	10900
Crockett	9400	(a)9320	9120	(a)8750	8570	8790	4770	9360
Benicia	5410	6530	7670	8300	5980	5590	7830	7220
Martinez	3410		6940	5810		5750	5180	3960
West Suisun	3710		2020	2260	2350	2260	(a)2310	(a)2350
Innisfail Ferry	2310	4350	6120	4800	(b)5160	3370	5260	4100
Port Chicago	(e)4120	(a)1060	1240	1240	(a)653	(a)571	1140	(a)857
O & A Ferry	(e)347		367				449	
Pittsburg	(e)131							
	Sacramento River Delta							
Collinsville		106	579	285	269	473	(a)237	98
Toland Landing								
Threemile Slough Bridge	20	16	20	12		8	20	12
Rio Vista Bridge	33	16	12	12	8	8	8	4
Isleton Bridge	12	12	12	4	8	4	8	4
	San Joaquin River Delta							
Antioch	45	90	163	171	110	102	(a)86	110
Millers Harbor	(a)49	29		(a)29	29	24	(a)24	24
Jersey Island	(a)29	29	(a)24	(a)24		33	(a)24	20
Threemile Slough		24	(a)20	(a)16		20	(a)16	16
Oulton Point	(a)20	20	20	(a)12	12		(a)20	16
San Andreas Landing	(a)29	20	20	16	16	12	20	(be)4
Opp. Central Landing	(a)12	16	(a)16	(a)8	16	12	(a)8	4
Dutch Slough	(a)41	33	(a)33		(a)33	24	(a)29	33
Piper Slough		33	29	(a)24	29		49	29
Webb Ferry		24	20	20	16	20	(a)20	(b)16
Holland Tract							(a)45	37
East Contra Costa I. D.	(a)110	122	(a)147	(a)65	78	110	(ab)106	106
Clifton Court Ferry		(a)106	(a)102	90		(a)69	(a)106	
Mossdale Bridge	(a)106	(a)106	(a)82	(a)86	90	(a)118	(a)110	
Vernalis	(d)106	106	(de)90	(d)86	(e)69	(de)106	(a)114	118

(*) Presumed.
 (a) Taken at Low High Tide.
 (b) Taken on following day.
 (c) Taken two days later.

(d) Taken over one hour off scheduled time.
 (e) Taken on preceding day.
 (f) Taken two days earlier.

TABLE 211

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide.
Salinity expressed in parts of chloride per million parts of water.

Station	November - 1953							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo, and Suisun Bays							
Point Orient	(c)15000	15400		15700	15600	15500	15000	14400
Point Pinole	13300				11910			11100
Point Davis	11700	11600	12400		10300	10000	10700	9360
Grand View	12400	12300	12200	12000	11600	11500	11400	11000
Crockett	10200	12000	11000		10300		(b)8630	8570
Benicia	8320	9260	7650	1340	(e)8040	7370	5930	7900
Martinez	6410	7380	9100	6900	5330	7280	4700	7000
West Suisun		5630	7550	5040	5020	4170	2360	
Innisfail Ferry	(*)2180	2350	(a)2450	(a)2410		1410	1880	1900
Port Chicago	4590	5300	7260	6020		4680	2120	5260
O & A Ferry	(a)116	1370	(a)1200	918	745	(a)373	297	853
Pittsburg		265	857	306	156	137	(a)138	
	Sacramento River Delta							
Collinsville	518	(a)86	(a)355	139	90	133	71	36
Toland Landing								
Threemile Slough Bridge	12	16	8	12	39	24	20	12
Rio Vista Bridge	4	8	12	4	4	8	12	4
Isleton Bridge	4	20	12	8	4	8	24	4
	San Joaquin River Delta							
Antioch	98	155	326	253	106	119	48	48
Millers Harbor	20	29	29	71	59	39	36	32
Jersey Island	29	24	(a)29		27			
Threemile Slough	16	(a)16	20		20	(a)24	24	36
Oulton Point	16	(a)24	(a)20	20		43		
San Andreas Landing	16	20	24	20		27	36	24
Opp. Central Landing	8	(a)24	(a)12	16	8	(a)12	12	20
Dutch Slough	33	(a)41	(a)41	39	35	39	52	52
Piper Slough	11	37	(a)41		39	(a)47	48	
Webb Ferry		33	24	24	20	31	32	28
Holland Tract	15	(a)53	45		55	(a)59	87	63
East Contra Costa I. D.	15	(a)122	(a)126	126	137	149	151	151
Clifton Court Ferry		(a)114						
Mossdale Bridge	(a)106	(a)102	(a)98	110	(a)106	(a)82	91	(a)103
Vernalis		(a)58			(cd)86	(a)90	(bd)95	(bd)99
	December - 1953							
	San Francisco, San Pablo, and Suisun Bays							
Point Orient	15000	15300	14300	15000	16200	16400	15300	14000
Point Pinole						11700		12700
Point Davis	9330		8990	10900	11500		9560	10800
Grand View	10200	11300	10500	10200	10100	10200	10100	9920
Crockett	9770		8170	9460	10800	9230		9480
Benicia	7500		5870					
Martinez	6750	8930	(a)3080	7620	7700	6130	5140	7700
West Suisun							2960	5320
Innisfail Ferry	1980	1490	(*)1110	1270	6430	(a)1750	(a)1850	1790
Port Chicago	5320	5510	2260	4210	5830	3790	3730	4700
O & A Ferry	732	376	(a)99	496	833	675	516	1230
Pittsburg	579	95			436	218		159
	Sacramento River Delta							
Collinsville	71	67	32	28	(*)329	198	60	194
Toland Landing								
Threemile Slough Bridge	28	16	4	12	12	8	(*)12	12
Rio Vista Bridge	12	(*)8	4	4	4	(d)8	8	8
Isleton Bridge	8	8	10	4	4	8	8	8
	San Joaquin River Delta							
Antioch	48	67	56	44	111	115	71	79
Millers Harbor	36	24	36	36	40	40	40	40
Jersey Island			(a)32	32	36			
Threemile Slough	32	20	(a)32	16				24
Oulton Point	28			28	24		28	36
San Andreas Landing	32	32	32	24	28		36	36
Opp. Central Landing		(a)2	(a)8	8	8		32	40
Dutch Slough	52	(a)2	(a)52	52	16	(a)16	16	16
Piper Slough	(*)52	44	(a)60		32	(a)56	60	52
Webb Ferry	36	36	48	28	28			32
Holland Tract	63	75	(a)87	60	52	56		60
East Contra Costa I. D.	151	(a)167	(a)143	143	135	(a)143	147	
Clifton Court Ferry	(a)103				107	(a)107		
Mossdale Bridge	(a)103	95	(a)99	99	(a)103	(a)99	107	111
Vernalis	(ac)143	(ac)103	(de)95	(bd)95				(a)99

- (e) Presumed.
(a) Taken at Low High Tide.
(b) Taken on following day.
(c) Taken two days later.

- (d) Taken over one hour off scheduled time.
(*) Taken on preceding day.
(f) Taken two days earlier.

TABLE 220

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high tide.
Salinity expressed in parts of chloride per million parts of water.

Station	January - 1954							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	15100	15600	15100	13900	15500	13500	10900	
Point Pinole						(a)10100		
Point Davis	11600	11200	11000	11900	9540	(b)5930	5830	6520
Grand View	9840	9900	10100	9780	8970	(b)9160	9080	7510
Crockett		(b)10900	10400	12300	10200	5320	4310	6070
Banicia	6050		7160	9560	8810		1640	
Martinez	8210	7960	5060	8610	6030	(a)2480	3450	2560
West Suisun	7080		4720	(*)6650		768	374	
Innisfall Ferry	2340	2460	2340	2480	2420	2230	1060	788
Port Chicago	6110	5910	3950	6030	4250	(b)512	315	(*)315
O & A Ferry	1650	(a)1430	992	2400	615	79	(b) 35	28
Pittsburg	337		(b)298	754	198	(a)39		39
Sacramento River Delta								
Collinsville	468	762	(a)143	492	190	16	4	12
Opposite Toland Landing								
Threemile Slough Bridge	12	20	16	24	12	20	12	4
Rio Vista Bridge	12	12	8	8	12	4	4	4
Isleton Bridge	8	12	8	8	8	4	8	4
San Joaquin River Delta								
Antioch	226	286	147	194	214	47	43	39
Hilliers Harbor	40	(a)44	40	64	48	43	47	47
Jersey Island								
Threemile Slough	20	(a)20		24	16	35	12	43
Oulton Point		(a)36		(a)36	44		39	32
San Andreas Landing		36	(a)36	40		28	32	32
Opposite Central Landing	20	28	12	32	16	4	4	12
Dutch Slough	(a)56	(a)56	60	56	(a)63	63	75	63
Piper Slough								
Webb Ferry	52	40	40	44	40	39	35	35
Webb Pump								
Webb Point (Hdqs.)								
Holland Tract	60	(a)75						
East Contra Costa I. D.	(a)143	(a)139	143	139	155	165	173	(b)4
Clifton Court Ferry								
Mossdale Bridge	(a)103	(a)107	115	127	(a)111	91		(a)71
Vernalis (g)		(c)115	131	(b)135	(b)111		106	
February - 1954								
San Francisco, San Pablo and Suisun Bays								
Point Orient	13300	(b)13100	12900	(e)10200	9550	7860	9770	
Point Pinole					5060			
Point Davis	6900	5560	5630	5730	3800	2250	4830	
Grand View	6230	6030	5400	5460	4630	4310	4290	
Crockett	(b)5220	4000	4930			2270	1600	
Banicia	3880	1420	(*)4670	4040	197	690	1480	
Martinez	2250	(a)335	3370	2860	99	670	374	
West Suisun	453		827	1640	99	24	134	
Innisfall Ferry	997	946	630	394	414	(a)410	(a)205	
Port Chicago	374	39	591	(b)59	39	24	63	
O & A Ferry	20	20		39	24	(b)24	12	
Pittsburg	35	(a)20	39	20	32			
Sacramento River Delta								
Collinsville			8	12	12	12	8	
Opposite Toland Landing								
Threemile Slough Bridge	12	4	16	8	8		4	
Rio Vista Bridge	4	4	8	8	12	16	12	
Isleton Bridge	4	4	4	4	8	8	8	
San Joaquin River Delta								
Antioch	35	35	28	35	35	32	24	
Hilliers Harbor	47	47	43	43	39	39	35	
Jersey Island					24	32	35	
Threemile Slough	8	16	24	28	12	(a)12	16	
Oulton Point		35	28	28	(a)20	24	20	
San Andreas Landing	32	(a)28		20	20	20		
Opposite Central Landing	8	12	4	16	(a)4	4	12	
Dutch Slough	83	87	83	71	(a)71	75	79	
Piper Slough								
Webb Ferry	39	43		39	35	(*)24	35	
Webb Pump								
Webb Point (Hdqs.)								
Holland Tract								
East Contra Costa I. D.	(a)169	(b)165	(b)158	138	(a)177	(a)169	165	
Clifton Court Ferry		91	99		(a)122	75	79	
Mossdale Bridge	(a)79	95	122	(a)114	(a)67	63	83	
Vernalis (g)		(*)99	(*)122	(*)187	(*)63		79	

(*) Presumed.
(a) Taken at Low High Tide.
(b) Taken on following day.
(c) Taken two days later.

(d) Taken over one hour off scheduled time.
(e) Taken on preceding day.
(f) Taken two days earlier.
(g) Station located above tidal action.

TABLE 220

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours after
 high high tide.
 Salinity expressed in parts of chloride per million parts of water.

Station	March - 1954							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo, and Suisun Bays							
Point Orient	12000	19320	13600		*8810	8830	8490	10700
Point Pinole					(a)6820			8200
Point Davis	5160	(b)5950	5790	4020	4560	3810	2590	5510
Grand View	1290	5670	6010	5920	*5630	1860	3560	3660
Crockett	5610	5100	4070	3180	2530	(a)2470	(a)1840	5370
Benicia	5520	3580	4470	610		1450	415	2920
Martinez	4750	(a)751	2250	560	108	1260	(a)553	2270
West Suisun	138	(*)569	1380		44	40	32	1320
Innisfail Ferry	252	(a)296	(a)316	368	(a)320	(a)225	(a)217	237
Port Chicago	973	79	1060	24	(e)16	20	28	810
O & A Ferry	24	(a)24	40	12	(a)12	(a)12	16	20
Pittsburg		(a)24	28		(ab)20		20	28
	Sacramento River Delta							
Collinsville		(a)20	12	8				
Opposite Toland Landing (**)			(a)8	8	4		8	12
Threemile Slough Bridge	12	16	8	4	4	4	4	8
Rio Vista Bridge	8	8	8	4	4		4	8
Isleton Bridge	8	4	8	4	4	2	4	8
	San Joaquin River Delta							
Antioch	24	(a)28	28	20	(a)24	20	24	24
Millers Harbor	39	40	36	28	(a)24	24	32	40
Jersey Island					(a)32		24	
Threemile Slough	20	(a)24	20	16	(a)12	(a)24	32	28
Oulton Point	24	24	20	16		16	24	28
San Andreas	20	(a)24	20	20	(a)12	(a)24	24	20
Opposite Central Landing	4	12	12	4	(a)4	4	8	16
Dutch Slough	51	43	47	56	52	59	71	63
Piper Slough								
Webb Ferry	24	28	20	24	(a)24	32	47	32
Webb Pump								
Webb Point (Hdqs.)								
Holland Tract								
East Contra Costa I. D.	165	154	119	140	136	126	75	
Clifton Court Ferry	(a)91		108		48	36	24	(a)24
Mossdale Bridge	(a)57	107	150	(a)52	16	32	28	(a)20
Vernalis(g)	72		(e)154	(f)16	(b)20	(b)24	24	
	April - 1954							
	San Francisco, San Pablo, and Suisun Bays							
Point Orient	8620	10800	9760	(e)8420	11400	9450	9900	11500
Point Pinole	(a)7590							(a)8240
Point Davis		5710	2900	3680	5910	3460	5120	6780
Grand View	4430	5390	4960	5120	4290	4530	4600	5590
Crockett	(a)4350	4170		1700	5000		2610	
Benicia	2870	1960	138	1560	2690	2170	1050	4000
Martinez	(a)1210	(a)99	138	(a)790	(a)375	908	1460	(a)514
West Suisun	256	217	47	103	367	636		731
Innisfail Ferry	(a)256	261	332	(a)209	(a)158	158	123	(a)127
Port Chicago	55	118	24	20	296	47	16	613
O & A Ferry	(a)36	(c)28						
Pittsburg	(a)40	(a)28			(a)20	(a)12		
	Sacramento River Delta							
Collinsville	(a)12	8		(a)12	(a)12	4		(a)8
Opposite Toland Landing (**)	(a)8	16	8	(a)16	(a)4	4		(a)8
Threemile Slough Bridge	12	16	8	8	4	4	8	4
Rio Vista Bridge	12	16	4	8	8	4	8	8
Isleton Bridge	8	4	4	8	4	4	4	16
	San Joaquin River Delta							
Antioch	(a)40	32	28	(a)28	(a)16	20	(*)12	(a)20
Millers Harbor	(a)40	(f)36	32	(a)24	(a)24	16	20	(a)20
Jersey Island							20	
Threemile Slough	(a)24	20		(*)12	(a)16	12	8	(a)12
Oulton Point	(a)24	20	16				12	(a)16
San Andreas Landing	(a)28	20	16	(a)12	(a)8	16	8	(a)16
Opposite Central Landing	(a)4	12	4	(a)4	4	4	4	(a)8
Dutch Slough	(a)55	51	43	(a)47	36	32	28	24
Piper Slough								
Webb Ferry	40	32	24	(a)24	16	12	12	(a)16
Webb Pump								
Webb Point (Hdqs.)								
Holland Tract								
East Contra Costa I. D.	47	(a)47	40	(a)40	40	40	40	(a)47
Clifton Court Ferry	23	24			36	40		43
Mossdale Bridge	24	24	36	36	32	32	24	24
Vernalis(g)	24	28	(e)32	36	(c)28		(b)28	24

(*) Presumed.

(**) Station relocated to a point on the east bank, 4.9 miles below Rio Vista, immediately downstream from Horseshoe Cut.

(a) Taken on Low High Tide.

(b) Taken on following day.

(c) Taken two days later.

(d) Taken over one hour off scheduled time.

(e) Taken on preceding day.

(f) Taken two days earlier.

(g) Station located above tidal action.

TABLE 220

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
Samples taken by local observers approximately one and one-half hours after high high tide.
Salinity expressed in parts of chloride per million parts of water.

Table with columns for Station, May - 1954 (2, 6, 10, 14, 18, 22, 26, 30), and June - 1954 (San Francisco, San Pablo, and Suisun Bays; Sacramento River Delta; San Joaquin River Delta). Rows include stations like Point Orient, Point Pinole, Grand View, etc.

(* Presumed.
(a) Taken on Low High Tide.
(b) Taken on following day.

(c) Taken two days later.
(d) Taken over one hour off scheduled time.
(e) Taken on preceding day.
(f) Taken two days earlier.
(g) Station located above tidal action.

Vertical text on the right margin: P, C, O, T, R, I, ...

TABLE 220

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide.
Salinity expressed in parts of chloride per million parts of water.

Station	July - 1954							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	15600	16300	(e)15700	16800	16700	16900		
Point Pinole							(a)15600	
Point Davis	13600	12500	(a)13400	14700	14800	13500	(b)14700	(b)15700
Grand View	11700	11900	(e)12300	13400	13300	13500	(e)13700	(b)13900
Crockett			(e)13600	15300	14400	(b)16000	(a)14400	15200
Benicia	(b)11100	10400	11500	12100	12400	12000	13600	14000
Martinez	(a)7110	(a)8580	(a)7750	(a)8540	(a)9960	(a)8640	(a)9290	(a)9400
West Suisun	8950	8790	(e)9760	10800	10600	11800	(e)11900	12800
Innisfail Ferry	(a)3140	2960	(a)3140	(a)3700	(a)4350	3790	(a)4800	(a)5730
Port Chicago	8340	7210	(e)8870	9430	8910	10400	10900	10800
O & A Ferry	3120	2790	(e)4000	4510	4410	5060	(e)5670	(a)5590
Pittsburg	2410		(d)2060	(a)2060	3320			(a)3280
Sacramento River Delta								
Collinsville	(a)1860	(a)1550	(a)1570	(a)2450	3440	3930	(a)3020	(a)4270
Opposite Toland Landing	(a)103	(a)209	(a)134	(a)241	(a)569	(a)348	(a)767	(a)1200
Threemile Slough Bridge	(*)56	63	83	229	217	431	818	(a)668
Rio Vista Bridge	28	20	20	36	36	51	87	126
Isleton Bridge	20	16	20	16	16	16	24	24
San Joaquin River Delta								
Antioch	1230	980	(a)692	(a)1230	1980	2610	(a)1970	(a)2460
Millers Harbor	(a)243	(a)245	(a)368	865	454	(a)589	(a)779	1200
Jersey Island							(a)522	(a)708
Threemile Slough	72	(a)63	(d)111	(a)170	146	(a)158	(d)320	660
Oulton Point			(a)43	(a)75			(a)174	(a)744
San Andreas Landing	(a)24	(a)20	(a)28	(a)36	47	(a)47	(a)75	(a)199
Opposite Central Landing	28	(a)20	(d)20	(a)20	24	(a)20		75
Dutch Slough	64	(a)63	(a)83	(d)119	(a)162	(d)190	(a)348	(a)427
Piper Slough								
Webb Ferry	52	(a)108	55	(a)99	241	134	(a)237	253
Webb Pump								
Webb Point (Hdqs.)								
Holland Tract								
East Contra Costa I. D.	36	(a)36	(a)40	36	67	(b)51	59	75
Clifton Court Ferry	(a)36	(a)36		40				55
Mossdale Bridge	133	(a)142	154	154	190	(a)174	202	194
Vernalis (g)	147		(e)170	(e)154	(c)182	198	(b)186	
August - 1954								
San Francisco, San Pablo and Suisun Bays								
Point Orient							17600	
Point Pinole								
Point Davis	15400	15000	15600	14800	15800	15400	15500	(b)14800
Grand View	14100	14300	(c)14700		15000	15200	(b)15300	15400
Crockett	14700	14300		(a)13700	14700	(a)13800	(a)15400	15200
Benicia	12600	13300	(e)13900	13400		13400	12000	11200
Martinez	(a)11100	11600	(a)10000	(a)9580	10700	11800	(a)9640	(a)9820
West Suisun	11200	11500	12100	9660	11800		10700	
Innisfail Ferry	6400	(a)6240	(a)6360	(a)6900	6900	6800	(a)6660	(a)6700
Port Chicago	9330	10400	10700	8730	10100	10200	10900	8660
O & A Ferry								
Pittsburg	3950	4580		(a)3440	3450	4100	(a)4060	3300
Sacramento River Delta								
Collinsville	(a)4150	(a)3340		(a)4050	4520	(a)3600		(a)2840
Opposite Toland Landing	1380	1340	(a)1010	(a)1070	1120		(a)640	784
Threemile Slough Bridge	707	790	782		656	676	636	
Rio Vista Bridge	36	51	20	36	43	(b)39	24	20
Isleton Bridge	24	24	28	20	20	(b)16	20	20
San Joaquin River Delta								
Antioch	3060	3430	(a)2770	(a)2980	3180	(a)2010	(a)2140	2320
Millers Harbor	1370	1970	(a)1200	1340	(a)1010	(a)1370	(a)780	(a)860
Jersey Island	1170			1480	(a)730	(a)592		
Threemile Slough	(a)605	(a)375	(a)411	(a)522	418		(a)364	(a)320
Oulton Point	(a)395	(a)229	(a)371			(a)103	(a)268	(a)232
San Andreas Landing	(a)123	(a)103	(a)95	(a)79	99	(a)75	(d)84	64
Opposite Central Landing	(a)40	(a)24	(a)32	43	(a)36	(a)24	20	(a)23
Dutch Slough	(a)526	462	688	617	473	400	388	(a)432
Piper Slough								
Webb Ferry	652	399	530	320	418	260	304	396
Webb Pump								
Webb Point (Hdqs.)								
Holland Tract								
East Contra Costa I. D.	103	(a)126	(a)158	162	(a)178	(b)193	196	(a)196
Clifton Court Ferry	(a)87			138	(a)110		160	(a)144
Mossdale Bridge	(a)194	(a)186	209	194	(a)146	(a)201	156	(a)160
Vernalis (g)	(e)190	(e)178	174	(e)174	(a)154	(c)152	(b)168	(b)152

(a) Presumed.
(a) Taken on Low High Tide.
(b) Taken on following day.

(c) Taken two days later.
(d) Taken over one hour off scheduled time.
(e) Taken on preceding day.
(f) Taken two days earlier.
(g) Station located above tidal action.

TABLE 220

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide.
Salinity expressed in parts of chloride per million parts of water.

Station	September - 1954							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo and Suisun Bays								
Point Orient	17200	17200	17400	17500	17400	(e)16800	17000	17200
Point Pinole								
Point Davis	15500	13800	14000	14800	(*)13100	(e)13800	(e)14100	13400
Grand View	15200	15500	15500	15400	15200		15000	14800
Crockett	(ab)12200	13800	(a)13500	14800		(e)14800		13200
Benicia	11900	11700	11900	11700	11600	7850	11300	11400
Martinez	(a)5780	(a)5200	(a)5900	9600	9340	(a)7280	8260	(a)8180
West Suisun	9660		9220		8880		7420	8180
Innisfail Ferry	6680	(a)6460	(a)6120	5580	(a)5060	(a)5060	4700	4460
Port Chicago	6620	9120	9560	8220	8160	8380	6160	6420
O & A Ferry							2760	2660
Pittsburg	3080	3210		(*)2540	1980		1240	
Sacramento River Delta								
Collinsville	(a)1800	(a)1600	(a)2170	2380	(a)1260	(a)1080	1240	1220
Opposite Toland Landing	(a)332			(*)240	88	(a)120	52	48
Threemile Slough bridge	164	(b)112	96	92	88	72	48	40
Rio Vista Bridge	20	(b)112	24	24	24	24	28	28
Isleton Bridge	20	(b)16	20	20	24	20	26	20
San Joaquin River Delta								
Antioch	1860	(a)1090	(a)1200	1400	1180	(a)528	540	624
Millers Harbor	(a)588	(a)572	548	348	(a)212	(a)272	(b)160	(a)108
Jersey Island	(a)524	(a)244						
Threemile Slough	(a)176		(a)80	100	76	(a)64	52	(a)44
Oulton Point	104	(a)96	(a)64	(a)100	(a)48		(a)52	(a)44
San Andreas Landing	56	(a)52	(a)48	48	(a)44	(a)36	28	32
Opposite Central Landing	(a)24	(a)24	(a)20	24	(a)24	(a)28	28	(a)24
Dutch Slough	340	(a)284	(a)248	(a)200		(a)124	108	(a)96
Piper Slough								
Webb Ferry	232	(a)172	136	(a)112	(a)76	(a)96	76	60
Webb Pump								
Webb Point (Hdqs.)								
Holland Tract								
East Contra Costa I. D.	196	(a)184	172	(a)164	(a)160	140	128	(a)132
Clifton Court Ferry	(a)144			(a)120	(*)156			(a)92
Mossdale Bridge	(a)150	(a)184	164	(a)160	(a)196	164	(a)164	(a)164
Vernalis(g)	(b)176	(b)164		160		(e)156	(f)176	(f)164
October - 1954								
San Francisco, San Pablo and Suisun Bays								
Point Orient			16700	16700	15500		16700	
Point Pinole								
Point Davis	12900	12600	12800					(b)12900
Grand View	15100	15000	14300		14000	14000	14100	14000
Crockett	11900	11500	12800	13000	11500	(b)11400		11000
Benicia	10600	9840	9900	9300	9340	9180	9080	9600
Martinez		(a)7480	6700	(a)6920	(a)6620	5940	7300	(a)6800
West Suisun	8200	6520	7800	6480	6420	7480		6560
Innisfail Ferry	4700	(a)4260	(a)3940	3720	(*)3500	3560		3340
Port Chicago	6920		5920	6480	5800	6080	4720	5620
O & A Ferry	2240	1500	1980	2200	1460	1380	1340	2100
Pittsburg	(a)560			460				
Sacramento River Delta								
Collinsville	(a)520	(a)328	640	1120	(a)540	480	560	
Opposite Toland Landing	44	(a)40	48	(a)28	(a)40	24	24	(a)20
Threemile Slough bridge	40	(b)36		32	24	20	28	
Rio Vista Bridge	20	(b)24	20	16	24	12	20	20
Isleton Bridge	16	(b)20	12	20	16	8	16	12
San Joaquin River Delta								
Antioch	456	(a)216	260	340	292	260	212	352
Millers Harbor	(a)96	(a)76	56	(a)56	(a)52	(f)40	48	(a)40
Jersey Island								
Threemile Slough	44		33	24	(a)24	24	28	
Oulton Point		(a)36		(a)28	(a)24	24	24	
San Andreas Landing	28	(a)32	28	24	(a)20	24	24	24
Opposite Central Landing	(a)24	(a)16	20	(a)20	(a)16	16	16	(a)16
Dutch Slough	84	72	64	(a)52	48	(a)48	44	(a)40
Piper Slough								
Webb Ferry	48	32	(a)36	36	32	(ae)28	32	24
Webb Pump								
Webb Point (Hdqs.)								
Holland Tract								
East Contra Costa I. D.	(b)128	(a)140	120	(a)132	(a)120	(f)160	(a)140	(a)80
Clifton Court Ferry							124	
Mossdale Bridge	(a)176	(a)160	(a)156	(a)164	(a)108	(a)104	(a)116	(a)124
Vernalis(g)	163	(e)160	(e)176	(e)180	(e)116	(b)104	140	(e)112

(*) Presumed.
(a) Taken on Low High Tide.
(b) Taken on following day.
(c) Taken two days later.

(d) Taken over one hour off scheduled time.
(e) Taken on preceding day.
(f) Taken two days earlier.
(g) Station located above tidal action.

TABLE 220

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide.
Salinity expressed in parts of chloride per million parts of water.

Station	November - 1954							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo and Suisun Bays							
Point Orient	15400	(e)15000	16700		13900	15500	(f)14900	14900
Point Pinole				11800	9900	10900	11200	10400
Point Davis	11000	12900		12700		12300	11100	10800
Grand View	14100	13600	13000					
Crockett	10300	12000		11200	(ab)8440	(b)9440	8820	9020
Benicia	7240	10000	11100	8960	6400	6740	6280	6280
Martinez		6840	10300	8200	5380	5740	6580	5460
West Suisun	5620		7320	6180			3820	4100
Innisfail Ferry	3440	(*)3520	(a)3500	3400	(*)3800	2240	2640	2220
Port Chicago	4420	6600	6080	6660	784	3500	3740	2700
O & A Ferry	1160	1380	2570	1680	172			592
Pittsburg				528				
	Sacramento River Delta							
Collinsville	236	736	1110	(a)484	60	56	(a)32	(a)60
Opposite Toland Landing	(a)20	20		(a)24			20	24
Threemile Slough Bridge	24	20	24	12	20	20	20	16
Rio Vista Bridge	16	16	12	12	20	20	20	16
Isleton Bridge	12	16	12	16	12	16	16	12
	San Joaquin River Delta							
Antioch	224	160	532	344	76	44	48	68
Millers Harbor	40	(a)32	40	36	.32	32	(a)32	(*)36
Jersey Island								
Threemile Slough	(a)24	24	20	(a)20	24	20	30	(a)28
Oulton Point	(a)32	24					(a)28	(a)28
San Andreas Landing	(a)24	24	20	24	24	28	32	36
Opposite Central Landing	(a)12	12		(a)12	24	16	(a)16	(a)24
Dutch Slough	40	40	40	36	(a)28	(a)28	32	(a)48
Piper Slough								
Webb Ferry	32	24	(e)32	24	24	28	32	32
Webb Pump								
Webb Point (Hdqs.)								
Holland Tract								
East Contra Costa I. D.	(a)92	104	108	(a)124	140	152	(e)160	(a)164
Clifton Court Ferry								
Mossdale Bridge	(a)136	(a)124	(a)140	(a)120	108	(a)112	(a)100	(a)112
Vernalis (g)	140		(e)140	(e)124	(b)108		(b)120	
	December - 1954							
	San Francisco, San Pablo and Suisun Bays							
Point Orient	14900	14500	14700	11900	12500	13300	14500	14500
Point Pinole								
Point Davis	10400	9100		7880	6420	6060	9200	
Grand View	10400	8860	8520	4620	6080	8920	6520	7020
Crockett	(a)8880	10400	7640	2340	5660	7920	8480	
Benicia	5700	7920	4980	800	4940	7020	7460	4880
Martinez	6000	5720	3640				4420	(a)3680
West Suisun	4580		2260	232			4640	3260
Innisfail Ferry	(a)2300	(a)2480	1760	1780	(ae)2040	(a)1800	(a)1820	(a)1720
Port Chicago	3620	(*)1120	1640	(*)96	2980	(a)4120	3420	2900
O & A Ferry	704	632	12	32	32	556	952	172
Pittsburg		76						
	Sacramento River Delta							
Collinsville	118	48	40	(a)20	32		108	52
Opposite Toland Landing	(a)24		20	16				20
Threemile Slough Bridge	20	12	16	16	20	(b)20	24	16
Rio Vista Bridge	12	12	20	12	20	16	20	12
Isleton Bridge	12	8	12	16	12	16	20	12
	San Joaquin River Delta							
Antioch	68	68	40	32	36	40	60	56
Millers Harbor	36	36	36	(a)40	40	44	44	56
Jersey Island								
Threemile Slough		24	24	(a)24		40	40	20
Oulton Point	28	28	(a)32					
San Andreas Landing	32	28	(a)8	(a)32	36	52	(a)44	44
Opposite Central Landing	24	12	(a)16	(a)8	16	24	(a)20	20
Dutch Slough	(a)48	15	(a)60	68	72	76	68	72
Piper Slough								
Webb Ferry	28	32	36	36	40	40	48	52
Webb Pump								
Webb Point (Hdqs.)								
Holland Tract								
East Contra Costa I. D.	164	172	(a)172	(a)168	176	192	(a)192	200
Clifton Court Ferry								
Mossdale Bridge	120	88	(a)96	(a)80	80	(a)88	(a)124	124
Vernalis (g)	(e)124	(b)108	80	(b)80	(e)76	(e)80	(f)100	(e)116

(*) Presumed.
(a) Taken on Low High Tide.
(b) Taken on following day.
(c) Taken two days later.

(d) Taken over one hour off scheduled time.
(e) Taken on preceding day.
(f) Taken two days earlier.
(g) Station located above tidal action.

TABLE 224

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after
high high tide
Salinity expressed in parts of chloride per million parts of water

Station	January - 1955							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo, and Suisun Bays							
Point Orient	14500	13900	12000	13600	14100	11900	12000	13300
Point Pinole								
Point Davis	5700	9560	8900	7880	8400	5480		8600
Grand View	(b)7940	7720	7620	6930	8460	5320	5000	(b)4500
Crockett	(d)7740	7820	4980	6720	8100	5200	(b)5700	7120
Benicia	6320	5840	4980	4900	6300	2440	2300	5740
Martinez	4320	2640	(a)1740	(a)2820	3620	2440	2120	6640
West Suisun					(a)2740		368	3240
Innsfall Ferry	1720		(a)1440	(a)1620	1620	1440	1380	672
Port Chicago	3780	824	2190	1220	2930	(d)103	248	2920
O & A Ferry	328	(a)60	80	40	40		44	36
Pittsburg	92	(b)44		44	(b)52			48
	Sacramento River Delta							
Collinsville	24	48	(a)24	60	16		24	44
Ematon (**)	20	20	20	16	24	20	24	24
Threemile Slough Bridge	20	20	20	16	24	20	20	20
Rio Vista Bridge	16	16	16	16	16	16	20	20
Isleton Bridge	16	8	12	16	16	16	16	20
	San Joaquin River Delta							
Antioch	60	40	44	48	48	56	60	52
Millers Harbor	(a)48	52	48	56	60	64	(a)48	64
Jersey Island								
Threemile Slough	44	24	(a)24	32	40	44	(a)40	44
Oulton Point		44	(a)48			52	(a)40	24
San Andreas Landing	40	44	48	28	24	44	36	44
Opp. Central Landing	20	24	(a)20	36	24	12	(a)16	24
Dutch Slough	64	76	68	76	84	(a)108	104	76
Webb Ferry		(a)44	52	(a)52	(b)56		(d)52	48
Holland Tract								
East Contra Costa Irrigation Dist.	196	(b)188	(a)180	164	172	(a)144	(a)152	160
Clifton Court Ferry								
Mossdale Bridge	64	(a)56	(a)72	76	(a)48	(a)48	(a)88	92
Vernalis (g)	(c)64		(b)64	76	(b)48	(a)44	(a)88	(r)44
	February - 1955							
	San Francisco, San Pablo, and Suisun Bays							
Point Orient	14400	14700		13200	13800	15000	14500	
Point Pinole								
Point Davis	7760	8620	9180	8280	8900	10700	10700	
Grand View		5800	5880	5960	4980	7100	7680	
Crockett	7840	8260	7520	(a)5530	7400	(b)9250	5840	
Benicia	6400	5160	(a)4100	4520	6430	6840	6740	
Martinez	4160	3380	2500	7760	7760	5140	6250	
West Suisun	4740	3520	1840	(a)2600			3920	
Innsfall Ferry	1060	1100	960	(a)760	1040	860	1060	
Port Chicago	2940	2520	1720	2760	1760	2930	3620	
O & A Ferry	178	69	59	184	599	356	266	
Pittsburg	73			359	149	62	(b)293	
	Sacramento River Delta							
Collinsville	52	37	40	27	86	(b)35	42	
Ematon (**)	29	(a)35	(a)24	20	22		(a)23	
Threemile Slough Bridge	24	16	22	21	26	21	14	
Rio Vista Bridge	24	16	20	20	17	16	11	
Isleton Bridge	22	16	13	18	14	8	9	
	San Joaquin River Delta							
Antioch	48	47	53	53	54	59	65	
Millers Harbor	56	(a)57	54	49	53	49	(a)52	
Jersey Island								
Threemile Slough	40	32	25	29	40	31		
Oulton Point	48	45	41	40	35	42	43	
San Andreas Landing	48	43	39	41	32	45	43	
Opposite Central Landing	36	(a)44	18	19	32	(a)16	14	
Dutch Slough	76	74	79	77	72	70	68	
Webb Ferry	48	50	52	45	49	(a)50	(d)45	
East Contra Costa Irrigation Dist.	(b)156	(ab)163	162	163	173	(a)178	(b)175	
Clifton Court Ferry	103		121	91	(a)102	(a)92	(a)82	
Mossdale Bridge	88	(a)106	77	82	(a)93	(a)77	93	
Vernalis (g)	(a)84	(r)97	(r)114	(b)93		84	(a)78	

(*) Presumed
(**) Formerly known as "Opposite Toland Landing."
(a) Taken on Low High Tide.
(b) Taken on following day.
(c) Taken two days later.

(d) Taken over one hour off scheduled time.
(e) Taken on preceding day.
(f) Taken two days earlier.
(g) Station located above tidal action.

TABLE 224 contd.

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours after
 high tide
 Salinity expressed in parts of chloride per million parts of water

Station	March - 1955							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo, and Suisun Bays							
Point Orient	12300	13800	14600		12700	14600		14700
Point Pinole								
Point Davis				6900	(d)10700	(b)11100		
Grand View	8120	8160	(b)8030	8560	(b)8820	9000	9400	9700
Crockett	(*)7000	7680	9180	(a)4450		10500	10800	10300
Bonicia	5170	5160	5380	6280	7040	7070	8500	8440
Martinez	5000	4300	(a)3360	3600	5920	(a)6000	(a)4200	7100
West Suisun		2260	3140	2720	3580	2600		5880
Innisfail Ferry	1600	1000	840	(a)1130	1330	(d)1410	1560	1690
Port Chicago	2430	2140	3220	1920	2960	4720	5720	5540
O & A Ferry	130		367	109	333	312	980	1680
Pittsburg	75	(*)86	(*)82		60			
	Sacramento River Delta							
Collinsville	33	33	(a)34	32	26	(a)60	305	704
Emmerton (ea)	19		22	20	19		20	
Threemile Slough Bridge	15	17	21	22	18	(a)17	17	19
Rio Vista Bridge	15	16	13	16	12	13	13	16
Isleton Bridge	15	11	14	5	10	10	9	12
	San Joaquin River Delta							
Antioch	60	53	(a)61	58	45	(a)51	(a)123	292
Millers Harbor	50	52	52	49	48	(a)44		(d)44
Jersey Island								
Threemile Slough	41	46	(a)42	28	33	(a)26		(d)20
Oulton Point	39	42	41	36	37	(a)27	31	32
San Andreas Landing	44	42	34	35	30	(a)16	23	22
Opposite Central Landing	25	17	12	16	11	(a)13	16	11
Dutch Slough	72	74	75	67	68	(a)59	52	52
Webb Ferry	44	48	(a)43	(d)50	(d)41	30	(d)38	36
East Contra Costa Irrigation Dist.	179	176	174	181	159	134	(b)87	80
Clifton Court Ferry	86		106	(d)88		116		95
Hossdale Bridge	25	(a)96	103	74	93	143	188	224
Vernalis (g)	(*)192	(*)87	(c)86	(b)91	115			(e)191
	April - 1955							
	San Francisco, San Pablo, and Suisun Bays							
Point Orient	15200	15100	15100	15400	13900	15700	15900	14500
Point Pinole								
Point Davis								
Grand View	10900	11200	11600	11300	11900	12900	(*)11200	9430
Crockett	(b)8200	(a)12300	11300	11800	12500	(d)9960	(e)12200	12600
Bonicia	(*)7300	8150	10800	10100		(b)13000	10300	(b)10600
Martinez	5720	(a)5320	9940	8530	9770	(d)6710	(a)3510	4340
West Suisun		510	(a)4030	7930	(a)7710	(a)6770	(a)1910	(a)5780
Innisfail Ferry	1660	510	1830	630	7380	7220	6270	
Port Chicago	3740	(a)1100	1600	1600	(a)1300	2150	2350	(a)1950
O & A Ferry	850	820	5920	4500	4830	6030	5030	(b)2510
Pittsburg	340	(a)330	1700	1320	1420	2310	487	
	Sacramento River Delta							
Collinsville	292	(a)184	554	768	(a)548	(a)853	469	(a)19
Emmerton (ea)	16	(a)20	(a)36	35	(a)24	(a)23	11	(a)12
Threemile Slough Bridge	16	16	19	19	19	23	10	(a)13
Rio Vista Bridge	12	12	16	11	9	9	12	(a)10
Isleton Bridge	8	8	8	13	8	6	8	(b)4
	San Joaquin River Delta							
Antioch	152	(a)132	336	301	(a)292	(a)342	324	(a)54
Millers Harbor	52	(ab)40	40	58	(a)59	(r)49	47	(a)24
Jersey Island						(a)51		(a)17
Threemile Slough		(a)24	(a)24	20	(a)25		17	
Oulton Point	24	(a)24	23	(d)24	(a)20	(a)20	(a)17	(a)17
San Andreas Landing	16	(a)16	(a)20	16	(a)12	(a)11	17	(a)13
Opposite Central Landing	16	(a)8	13	16	(a)10	(a)8	8	(a)7
Dutch Slough	44	40	34	36	(a)34	38	32	(a)28
Webb Ferry	32	(a)28	(d)24	(d)23	(d)21	(d)29	22	(a)18
East Contra Costa Irrigation Dist.	96	30	(b)66	(b)62	55	82	65	(a)78
Clifton Court Ferry		76			47	43	51	
Hossdale Bridge	(a)220	192	185	161	204	126	91	(a)134
Vernalis (g)	(*)192	(c)188	(e)169	(b)172		(b)93	102	(e)124

(*) Presumed.
 (ea) Formerly known as "Opposite Toland Landing."
 (a) Taken on Low High Tide.
 (b) Taken on following day.
 (c) Taken two days later.
 (d) Taken over one hour off scheduled time.
 (e) Taken on preceding day.
 (f) Taken two days earlier.
 (g) Station located above tidal action.

TABLE 224 - contd.

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours after high high tide
 Salinity expressed in parts of chloride per million parts of water

Station	May - 1955							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo, and Suisun Bays							
Point Orient	(a)13300		14100			15400		(b)15000
Point Pinnole		11400	8750	9350		11400	9280	11100
Point Davis	12200	12000	11700	11600	10600	10600	9730	10500
Grand View		10100	(d)7720	5190	(b)9280	(ab)9060	7330	(b)7150
Crockett	7140	8040	4600	3660	6720	9030	6650	(b)7050
Benicia	(a)2650	(a)2650	(a)2350	(a)2360	3220	(a)4060	(a)6060	(a)2540
Martinez	2530	5500	2380	2320		6510	3920	
West Suisun	(a)1330	1100	733	(a)1260	(a)1320	(a)571	(a)1140	(a)983
Innisfail Ferry	437	(a)4170	2160	(a)1060	3850	6350	3590	2420
Port Chicago	96	242	49	26	126	1100	331	(b)137
O & A Ferry		(ab)31	(a)25		(a)98		199	(ab)196
Pittsburg								
	Sacramento River Delta							
Collinsville	(a)23	(a)16	19	(a)13		(a)185	58	(a)27
Ematon	(a)9	(a)9	8			(a)11	13	(a)10
Threemile Slough Bridge	9	9	9	(b)7	8	17	(a)11	(b)8
Rio Vista Bridge	9	9	9	(b)10	9	12	11	(b)9
Isleton Bridge	7	(a)12	7	(b)7	7	9	7	(b)5
	San Joaquin River Delta							
Antioch	(a)44	(a)29	(a)21	(a)23	(a)18	(a)82	89	(a)37
Millers Harbor	25	(a)18	16	(a)16	(a)15			
Jersey Island			13				12	(a)12
Threemile Slough	(a)12		10	(a)12	(a)11	(a)11	16	(a)16
Oulton Point	(a)15		13	(a)14	(a)11	(a)14	13	(a)13
San Andreas Landing	(a)13	(a)10	8		(a)8	10	11	(a)12
Opposite Central Landing	(a)2	(a)7	24	(a)24	(a)30	18	19	(a)20
Dutch Slough	(a)27	(a)20	15		(a)14	(a)15	(d)16	(a)15
Webb Ferry	(a)21	64	(b)75	(a)92	86	39	35	(a)40
East Contra Costa Irrigation Dist.	117	46	(a)46		38		49	
Clifton Court Ferry	134	122	117	(a)166	186	215	19	(a)52
Mossdale Bridge		128	(b)126	168	(a)191	(f)208	(b)85	
Vernalis (g)								
	June - 1955							
	San Francisco, San Pablo, and Suisun Bays							
Point Orient	(a)15100	15300	(a)15600	14600		15900		(e)16300
Point Pinnole	10650	11300	(b)9160	10800	10600	12800	(b)11700	
Point Davis	11200	10300	10900	11100	12200	11700	12800	(e)13200
Grand View	9380	(a)9690	9870	9900	12100	11900	11600	(e)12300
Crockett	7300	9100	7530	8440	9340	9640	8220	10100
Benicia	(a)2790	(a)3570	(a)4620	(a)3440	(a)4480	(a)4960	(a)4960	(a)6350
Martinez	4100	6300	4860	5940	8670	7900	7010	7790
West Suisun	(b)10900		1150	1230	(a)1270	1610	1790	2190
Innisfail Ferry	3950	3970	3870	4440	6230	(ab)5880	1610	7650
Port Chicago	164	960	463	298	934	1180	1370	1830
O & A Ferry		(a)161	199	(a)158		(a)884	(a)740	(ab)787
Pittsburg								
	Sacramento River Delta							
Collinsville	(a)31	(a)132	191		(a)205		(a)592	(a)690
Ematon	13	17	14	(a)12		51	(a)32	189
Threemile Slough Bridge	(a)8	9	14	(b)12	12	16	16	35
Rio Vista Bridge	10	11	6	(b)18	8	19	(b)13	14
Isleton Bridge	6	14	8	(b)8	13	12	(b)16	21
	San Joaquin River Delta							
Antioch	(a)34	(a)71	100	(a)54	(a)89	433	(a)349	(a)324
Millers Harbor	(a)16	19	25	(a)21		42	(b)63	364
Jersey Island				(a)18	(a)19	79		26
Threemile Slough	(a)11	(a)15	13	(a)16	(a)18	(a)23		(a)21
Oulton Point	(a)10	(a)15	17	(a)17			(a)18	(a)18
San Andreas Landing	(a)17	(a)15	18	(a)13	(a)16	(a)18	(a)15	(a)18
Opposite Central Landing	(a)6	18	10	(a)24	(a)10	13	(a)18	(a)15
Dutch Slough	(a)21	(a)15	18	(a)22	20	27	(a)24	(a)37
Webb Ferry	(a)14	(a)13	19	15	(d)17	14	(a)36	(e)36
East Contra Costa Irrigation Dist.	(a)38	(a)33	30	(a)32	29	28	(a)29	
Clifton Court Ferry	36	28	26	(a)53	83	130	(a)153	171
Mossdale	(b)73	(b)52	33	58	(e)77	(a)135	(e)159	
Vernalis (g)								

(c) Presumed.
 (a) Taken on Low High Tide.
 (b) Taken on following day.
 (e) Taken two days later.

(d) Taken over one hour off scheduled time.
 (e) Taken on preceding day.
 (f) Taken two days earlier.
 (g) Station located above tidal action.

TABLE 224 - contd.

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours after high high tide
 Salinity expressed in parts of chloride per million parts of water

Station	July - 1955							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Orient	16500		15600	15600 (a)14,300	15900 (a)13700	16000	15800	(a)17800 (a)16100
Point Pinole								
Point Davis								
Grand View		13000	14500	13100	13700	13800	13100	(b)14,000
Crockett			12000	12600	(a)11900	13000	(ab)12,000	(b)14,000
Benicia	11250	10100	9780	9960	12100	(f)10800	10700	12600
Martinez	6500	(a)5540	8240	(a)6660	(a)6630	(a)8260	(a)9060	(a)8460
West Suisun	5700	7700	8570	10400	10200		7170	
Innisfail Ferry	2110							
Port Chicago	5200	7660	6630	(b)8530	8810	8120	8730	9660
O & A Ferry	2950	2030	2170	(b)3860	3960	4100	4330	5340
Pittsburg	(ab)1030	(a)595	(a)1380	(a)1380	(ab)3270	(a)3060	(b)3410	
Sacramento River Delta								
Collinsville	(a)1110	1640	1530		(a)1970	2640	(a)2190	(a)2550
Emston	50	255	75	(a)89	311	548	(a)172	1015
Threeville Slough Bridge	32	49	50	(b)68	170	215	195	351
Rio Vista Bridge	26	16	15	(b)19	32	24	(b)15	25
Isleton Bridge	13	23	13	(b)15	13	13	(b)14	13
San Joaquin River Delta								
Antioch	(a)1412	(a)596	853	(a)643	(a)1220	2010	(a)1270	(a)1410
Millers Harbor	125	278	220	(a)497	(a)498	600		1841
Jersey Island	204	(a)76						
Threeville Slough	(a)24	(a)39	45	(d)75	(a)139		(a)167	395
Oulton Point	(a)24		(a)53	(a)39	(a)53	159	(a)111	(d)110
San Andreas Landing	(a)20	(a)18	(a)21	(a)24	(a)32	48	(a)21	(a)46
Opposite Central Landing	(a)15		(a)17	(a)20	(a)17	22	(a)16	(a)16
Dutch Slough	(a)24	57	(a)61	(a)74	(a)114	182	(a)161	(a)209
Webb Ferry	32	37	(a)57	(a)58	172	(a)174	(d)181	(a)183
East Contra Costa Irrigation Dist.	20	28	(a)32	(a)33	33	40	(ab)51	(a)54
Clifton Court Ferry		(d)24			30	35		
Mossdale Bridge	182	154	(a)196	(a)185	191	(a)176	(a)210	184
Vernalis (g)		(e)178	(e)167	(b)193	(b)137	189	185	(e)183
August - 1955								
San Francisco, San Pablo, and Suisun Bays								
Point Orient	18400	19900	18500	(e)18500		19700	18700	19000
Point Pinole	(a)16300		(d)19000					
Point Davis								
Grand View	15200	15300	(a)16100		16600	16700	16500	16300
Crockett	(a)13700	12700	14300	(e)15700	(a)16600	15600	15000	(a)14800
Benicia	12700	12100	13600	13800	15100	12600	13500	13300
Martinez	(a)8450	(a)9160	10500	(a)10800	(a)9810	(a)10700	11000	(a)9100
West Suisun	10000	9700	12600	12400	11500	11700	11800	
Innisfail Ferry								
Port Chicago	7580	9360	10600	12500	10400	9650	10200	10200
O & A Ferry	5150	5110	6150	5120	5590	6400	4920	5290
Pittsburg		(a)3720	(ab)2600	(ab)3100	(a)3000	(a)7800		(a)2640
Sacramento River Delta								
Collinsville	(a)3260	3190	(a)3250	(a)3520	(a)3880	(a)3340		(a)2800
Emston	685	594	(a)462	(a)438	(a)306	540	450	1080
Threeville Slough Bridge	356	373	477	635	577	513	(e)426	338
Rio Vista Bridge	28	17	40	158	32	14	(b)16	19
Isleton Bridge	12	12	15	14		(a)12	(b)14	(a)14
San Joaquin River Delta								
Antioch	(a)1690	2270	(a)1890	(a)2100	2670	3320	(a)1400	(a)1790
Millers Harbor	(a)1080	(a)1140	1370	2360	(a)1230	1410	(a)880	1670
Jersey Island	(b)1130	870			(a)512	735		
Threeville Slough	(a)272	428	(a)154	(a)302	(a)342	280	(a)304	306
Oulton Point	(a)139	171	(a)126	(a)162	376	(a)152	(a)177	(a)102
San Andreas Landing	(a)46	98	(a)44	(a)66	(a)89	68	(a)17	(a)80
Opposite Central Landing	(a)19	20	(a)15			(a)15	(a)17	(a)15
Dutch Slough	265	336	(a)337	(a)392	454	(a)405	(a)346	(e)342
Webb Ferry	(a)166	162	(a)323	(a)298	331	(a)330	(e)283	(a)280
East Contra Costa Irrigation Dist.	62	72	(a)93	(a)108	113	(a)139	(b)147	(a)157
Clifton Court Ferry			(e)71		80	(d)88		112
Mossdale Bridge	186	176	(a)196	(a)187	169	(a)178	(a)180	166
Vernalis (g)	186	(a)231	(e)155		(e)174	(b)158	180	151

(e) Presumed.
 (a) Taken on Low High Tide.
 (b) Taken on following day.
 (c) Taken two days later.
 (d) Taken over one hour off scheduled time.
 (e) Taken on preceding day.
 (f) Taken two days earlier.
 (g) Station located above tidal action.

TABLE 224 - contd.

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours after
 high high tide
 Salinity expressed in parts of chloride per million parts of water

Station	September - 1955							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo, and Suisun Bays							
Point Orient	(a)17700		20000	18100	18600	18200	(a)16100	18000
Point Pinole				(a)16500				15700
Point Davis					16000	16500	15700	15900
Grand View	16100	16600	16100	16500	15000	13300	13200	13800
Crockett	(d)11000	16200	14700	(a)15000	15000	12200	12100	16800
Benicia	12300	12200	(e)12500	13300	9100	(a)8870	(a)8450	9700
Martinez	(a)11100	(a)9990	(a)9350	(a)9400	10100		9850	
West Suisun	10000		10600	11500			(a)5780	(a)5100
Innisfall Ferry		10300	9500	10000	8550	8550	7900	7550
Port Chicago	10400	5130	4940	3630	4220	3540	(b)1700	2550
O & A Ferry	5120				(a)2360		(a)1000	1270
Pittsburg	(a)3820	(a)3660						
	Sacramento River Delta							
Collinsville	(a)2920	(a)3040	(a)2410		1790	(a)1600	(a)1280	1190
Ematon	(a)375	(a)350		(a)294	200	(a)93		141
Threemile Slough Bridge		340	(b)380	196	89	71	(b)40	50
Rio Vista Bridge	22	15	(b)19	16	16	18	(b)19	20
Isleton Bridge	12	18	(b)13	14	17	20	(b)17	18
	San Joaquin River Delta							
Antioch	2150	2350	2125	(a)1870	1550	1210	(a)576	720
Millers Harbor	1260			700	737	358	(a)214	325
Jersey Island		249	(a)134	(a)183	(ab)81	(a)88	(a)59	50
Threemile Slough		(a)112	(a)61	(a)59	(a)50	(a)44	(a)44	50
Oulton Point	243	(a)71	(a)18	(a)49	(a)43	(a)36	(a)33	30
San Andreas Landing	(a)21	(a)17	(a)15	(a)17	(a)18	(a)18	(a)16	18
Opposite Central Landing	3.9	(a)309	(a)278	(a)236	(a)206	(a)165	(a)148	118
Dutch Slough	(a)158	(a)199	(a)219	(ab)210	(a)104	(a)100	(a)75	(e)165
Webb Ferry	157	(a)148	(b)149	(a)142	(a)140	(a)142	134	(a)154
East Contra Costa Irrigation Dist.				(a)105		(a)96	(a)87	
Clifton Court Ferry			(a)194	158	(a)175	(a)171	(a)178	(a)189
Hossdale Bridge	186	(a)160	(a)157	(e)151	(e)169	(b)163	(b)155	
Vernalis (g)								
	October - 1955							
	San Francisco, San Pablo, and Suisun Bays							
Point Orient	18300		17800	18200		17100	16900	18000
Point Pinole			(a)16200				14800	
Point Davis					15100	15500	15400	14700
Grand View	15300	16300	16400	15200	14000	12400	13900	14100
Crockett	(b)15300	13900	(b)13900	13400	11700	10300		12400
Benicia	10500	11300	11500	12300	9900	(a)9000	(a)8250	10600
Martinez	10000	(a)7940	(a)9250	9900	9300	8760	5200	11200
West Suisun	9800	8500	8750	5080	5040	(a)5200	(ab)5140	(a)5020
Innisfall Ferry			9130	9050	8200	6350	8180	9750
Port Chicago	7630	8800	2480	3420	3890	2400	3000	4040
O & A Ferry	(a)3160	3100	(ab)1180	(b)2470	1850		(b)735	(b)1370
Pittsburg	3440	1170						
	Sacramento River Delta							
Collinsville	1820	(a)960		2280	(a)1210	(a)1220		2065
Ematon	(a)62	(a)63	(a)69	68	(a)64		52	27
Threemile Slough Bridge	56		(b)50	53	41	33	23	12
Rio Vista Bridge	21	21	(b)15	17	13	14	12	12
Isleton Bridge	15	17	(b)12	13	8	11	10	12
	San Joaquin River Delta							
Antioch	970	1100	(a)780	1090	990	690	662	905
Millers Harbor	160	(a)160	(a)159	127	147	128	80	64
Jersey Island				152				
Threemile Slough		(a)38	(a)51	82	(a)57		31	(a)34
Oulton Point	55	(a)34	(a)38	47	(a)32	(a)25	21	24
San Andreas Landing	29	(a)29	(a)23	22	(a)22	(a)20	13	14
Opposite Central Landing	17	(a)14	(a)11	14	(a)11	(a)10	52	51
Dutch Slough	107	(a)91	(a)82	76	(a)77	(a)61	33	31
Webb Ferry	(d)79	(a)76	(a)47	(e)45	(a)43	(a)43	173	(a)80
East Contra Costa Irrigation Dist.	(a)141	(a)132	(b)130	(a)112	(a)117	(b)131		(a)122
Clifton Court Ferry				(a)167	(a)173			(a)158
Hossdale Bridge	(a)187	(a)187	(a)181	(a)168	(a)143	(a)133	149	
Vernalis (g)	(e)188	(a)176	(a)169	184	140	(e)131	(e)191	

(e) Presumed.
 (a) Taken on Low High Tide.
 (b) Taken on following day.
 (c) Taken two days later.
 (d) Taken over one hour off scheduled time.
 (e) Taken on preceding day.
 (f) Taken two days earlier.
 (g) Station located above tidal action.

TABLE 234

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours after
 high high tide
 parts per million

Station	October 1955							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo, and Suisun Bays							
Point Orient	18300		17800	18200		17100	16900	18000
Point Pinole			(a)16200				14800	
Point Davis								
Grand View	15300	16300	16400	15200	15100	15500	15400	14700
Crockett	(b)15300	13900	(b)13900	13400	14000	12400	13900	14100
Benicia	11500	11300	11500	12300	11700	10300		12400
Martinez	10000	(a)7940	(a)9250	9900	(a)9000	(a)8250	9200	10800
West Suisun	9600	8500	8750		9300	8760		11200
Innisfall Ferry				5080	5040	(a)5200	(ab)5140	(a)5080
Port Chicago	7530	8800	9130	9050	8200	6350	8180	9750
O & A Ferry	3150	3100	2480	3420	3890	2400	3000	4040
Pittsburg	3440	1170	(ab)1180	(b)2470	1850		(b)735	(b)1370
	Sacramento River Delta							
Collinsville	1820	(a)960	2280		(a)1210	(a)1220		2065
Emmaton	(a)62	(a)63	69	68	(a)64		52	
Threemile Slough-SR	56		(b)50	53	41	33	23	27
Rio Vista Bridge	21	21	(b)15	17	13	14	12	12
Isleton Bridge	15	17	(b)12	13	8	11	10	12
	San Joaquin River Delta							
Antioch	970	1100	780	1090	990	690	662	905
Millers Harbor	160	(a)160	(a)159	127	147	128	80	64
Jersey Island				152				
Threemile Slough-SJR		(a)38	(a)53	82	(a)57		31	(a)34
Oulton Point	55	(a)34	(a)38	47	(a)32	(a)25		24
San Andreas Landing	29	(a)29	(a)23	22	*22	(a*)20	21	14
Opposite Central Landing	17	(a)14	(a)11	14	(a)11	(a)10	13	12
Dutch Slough	107	(a)91	(a)82	76	77	61	52	51
Webb Ferry	79	(a)76	47	(e)45	(a)43	(a)43	33	31
East Contra Costa I. D.	(a)141	(a)132	(b)130	(a)112	(a)117	131	173	(a)80
Clifton Court Ferry				(a)67	(a)73			(a)122
Mossdale Bridge	(a)187	(a)187	(a)181	(a)168	(a)143	(a)133	149	(a)158
Vernalis (g)	(c)168	(e)176	(b)169	184	140	(e)131	(e)191	
	November 1955							
	San Francisco, San Pablo, and Suisun Bays							
Point Orient	17900	16900	18200	*18000		16500	16700	15900
Point Pinole	15300		15000					
Point Davis								
Grand View	14700	14900	15000	14500	15000	14600	14500	14000
Crockett	14200	11400	(b)14000	13500	12700	(a)9350	11700	13000
Benicia	10800	9200	11900	10900	8700	8720	10100	9370
Martinez	11900	(a)6900	11400	11700	10500	8360		7900
West Suisun			8900			(a)5080	6560	
Innisfall Ferry	5020	4860	4700	4650	5020	4800	(ab)4930	3510
Port Chicago	9150	7280	8330	8220	6260	6150	6570	1500
O & A Ferry	3290	2620	2860	3630	2440	1900	1590	2270
Pittsburg	3190	(ab)1080	1210	1830	1190			430
	Sacramento River Delta							
Collinsville	(a)1150	1350	1390	1880	915	396		992
Emmaton	(a)37			158	113	28		(a)25
Threemile Slough-SR	37	26	24	32	27	15	11	
Rio Vista Bridge	15	11	12	12	12	13	9	10
Isleton Bridge	9	10	13	10	9	9	8	13
	San Joaquin River Delta							
Antioch	1220	615	840	1270	784	312	144	328
Millers Harbor	96	88	61		(a)77	(a)55	32	33
Jersey Island								
Threemile Slough-SJR		(a)26	28	33	(a)25	23	18	(a)17
Oulton Point	(a)25	(a)23	32	32	(a)20		19	(a)22
San Andreas Landing	22	(a)22	16	31	(a)22	23	17	22
Opposite Central Landing	(a)11	(a)11	11	12	(a)10	15	8	(a)7
Dutch Slough	(a)49	(a)43	42	43	(a)44	40	41	(a)39
Webb Ferry	30	29	(b)29	32	(a)28	(b)27		(e)22
East Contra Costa I.D.	(a)86	(a)84	(b)84	(a)91	(a)104	120	132	130
Clifton Court Ferry				(a)146				
Mossdale Bridge	(a)173	(a)122	(a)161	206	(a)163	(e)134	120	(a)125
Vernalis (g)		(c)129	(c)202		136		121	(e)120

EXTRA

(*) Presumed.
 (a) Taken on Low High Tide.
 (b) Taken on following day.
 (c) Taken two days later.

(d) Taken over one hour off scheduled time.
 (e) Taken on preceding day.
 (f) Taken two days earlier.
 (g) Station located above tidal action.

TABLE 224 contd.

SALINITY OBSERVATION, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide
Salinity expressed in parts of chloride per million parts of water

Station	November - 1955							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Orient	17900	16900	18200	18000		16500	16700	(d)15900
Point Pinole	15300		15000					
Point Davis								
Grand View	11700	11900	15000	11500	15000	11600	11500	11000
Crockett	11700	11400	(b)11000	11500	12700	(a)9300	11700	13000
Benicia	11900	9700	11900	16900	8700	8700	10100	9370
Martinez	11900	(a)16900	11400	11700	10500	8300		7900
West Suisun			8900			(a)5080	6560	
Innisfail Ferry	5520	4860	4700	4650	5020	4800	(ab)4930	3510
Port Chicago	6150	7280	8330	8220	6260	6150	6570	7500
O & A Ferry	3290	2620	2660	3630	2440	1900	1590	2270
Pittsburg	3190	(ab)1060	1210	1030	1190			430
Sacramento River Delta								
Collinsville	(a)1150	1350	1390	1880	915	396		992
Ematon	(a)37			158	113	28		(a)26
Threemile Slough Bridge	37	26	24	32	27	15	11	
Rio Vista Bridge	15	11	12	12	12	13	9	10
Isleton Bridge	9	10	13	10	9	9	8	13
San Joaquin River Delta								
Antioch	1220	615	840	1270	784	312	114	388
Millers Harbor	96	88	61		(a)77	(a)55	32	(d)33
Jersey Island								
Threemile Slough		(a)26	28	33	(a)25	(d)23	18	(a)17
Gulton Point	(a)25	(a)23	32	32	(a)20		19	(a)22
San Andreas Landing	22	(a)22	16	31	(a)22	23	17	22
Opposite Central Landing	(a)11	(a)11	11	12	(a)10		8	15
Dutch Slough	(a)45	(a)43	42	43	(a)44	40	41	(a)39
Webb Ferry	33	(d)29	(a)29	32	(a)28	(b)27	(a)27	(a)22
East Contra Costa Irrigation Dist.	(a)56	(a)84	(b)84	(a)91	(a)104	120	132	130
Clifton Court Ferry				(a)146				
Mossdale Bridge	(a)173	(a)122	(a)161	(a)206	(a)163	(a)134	120	(a)125
Vernalis (g)		(c)129	(c)202		136		121	(a)120
December - 1955								
San Francisco, San Pablo, and Suisun Bays								
Point Orient	15500		16900	15100	16100	13400	2510	4630
Point Pinole		13900		13200				
Point Davis								
Grand View	11200	13700	12700	12800	11400	3230	2150	1110
Crockett	12500	12300	9760	(b)9750	10100	1990	82	24
Benicia	9100	12700	8700	6650	6100	4500	50	29
Martinez	(a)9300	9550	7630	6400	8460	(e)2730	23	30
West Suisun	8300			4000	4600	2260	50	150
Innisfail Ferry	3620	3400		1910		(a)2920	283	295
Port Chicago	7130	7600	2190	4430	6450	1570	26	21
O & A Ferry	2050	1760	310	476	321	(a)30	6	14
Pittsburg	674		560	(b)111		58		
Sacramento River Delta								
Collinsville	(a)308	607		54	(a)37	21		8
Ematon			11			4	2	(a)3
Threemile Slough Bridge	13	14	7	7	10	3	3	2
Rio Vista Bridge	10	(a)12	6	8	11		6	7
Isleton Bridge	10	10	4	11	12	5	4	3
San Joaquin River Delta								
Antioch	454	300	104	73	102	66	42	19
Millers Harbor	35	31	31	29	30	(a)33	40	(b)29
Jersey Island								
Threemile Slough		20	19			14		
Gulton Point	(a)20	26	20	(a)20		17		
San Andreas Landing	20	21	20	24	(a)24	6		
Opposite Central Landing	(a)10	10	8	(a)9	(a)15	7	2	(a)4
Dutch Slough	(a)40	40	44	(a)53	36	53	91	(a)30
Webb Ferry	(a)20	(d)23	23	22	(d)26	(d)27		
East Contra Costa Irrigation Dist.	134	(b)146	151	(ab)173	(a)173	162	(b)42	(a)23
Clifton Court Ferry								
Mossdale Bridge	(a)120	113	(a)82	(a)79	(a)86	(d)69	(d)4	(a)10
Vernalis (g)	125	105		(e)77	(e)87			

EXTRA

(e) Presumed.
 (a) Taken on Low High Tide.
 (b) Taken on following day.
 (c) Taken two days later.
 (d) Taken over one hour off scheduled time.
 (e) Taken on preceding day.
 (f) Taken two days earlier.
 (g) Station located above tidal action.

TABLE 234

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide
parts per million

Station	December 1955							
	2	5	10	14	18	22	25	30
	San Francisco, San Pablo, and Suisun Bays							
Point Orient	15800		16900	15100	16100	13400	2510	4630
Point Pinole		13900		13200				
Point Davis								
Grand View	14200	13700	12700	12800	11400	3230	2150	1110
Crockett	12600	12800	9760	(b)9750	10100	1990	82	24
Benicia	9300	10700	8700	6650	6100	4500	(a)50	29
Martinez	(a)6300	9550	7630	6400	8450	(e)2730	23	30
West Suisun	8300			4000	4600	2260	50	150
Innisfall Ferry	3620	3400		1910		(a)2920	283	295
Port Chicago	7130	7600	2190	4430	6450	1570	26	21
O & A Ferry	2050	1760	310	476	321	30	6	14
Pittsburg	874		560	(b)111		58		
	Sacramento River Delta							
Collinsville	(a)308	607	54	(a)37		21		8
Emmerton			11			4	2	(a)3
Threemile Slough-SR	13	14	7	7	10	3	3	2
Rio Vista Bridge	10	(a)12	6	8	11	lost	6	7
Isleton Bridge	10	10	4	11	12	5	4	3
	San Joaquin River Delta							
Antioch	454	300	104	73	102	66		19
Millers Harbor	38	31	31	29	30	(a)33	40	(b)29
Jersey Island								
Threemile Slough-SJR		20	19			14		
Oulton Point	(a)20	25	20	(a)20		17		
San Andreas Landing	20	21	20	24	(a)24	6		
Opposite Central Landing	(a)10	10	8	(a)9	(a)15	7	2	(a)4
Witch Slough	(a)40	45	44	(a)53	36	53	91	(a)30
Abb Ferry	20	(c)23	23	22	(d)26	(d)27		
West Contra Costa I.D.	134	(b)134	151	(ab)173	(a)173	162	(b)42	(a)23
Clifton Court Ferry								
Mossdale Bridge	120	113	(a)82	(a)79	(a)86	(a)69	(a)4	(a)10
Vernalis (g)	125	105		(e)77	(c)87			
	January 1956							
	San Francisco, San Pablo, and Suisun Bays							
Point Orient	4960	6160	8060		4060	4880	(a)6140	4460
Point Pinole		1270	3100				(a)3800	
Point Davis	*57	(b)1020	2010	955	54	209	765	27
Grand View	683	652	801	827	259	402	890	607
Crockett	19	1130	1530		(a)36	170	546	
Benicia	20	(a)141	155	73	28	43	28	19
Martinez	(a)49	24	66	34	24	26	19	37
West Suisun	40		55	99	16	33		50
Innisfall Ferry	(a)35	39		343	139	130	16	*9
Port Chicago	26	24	21	20	(a)25	23	23	29
O & A Ferry	8	10	11	10	6	17	9	*13
Pittsburg			29	20	(b)14	15	16	(a)28
	Sacramento River Delta							
Collinsville	10	11	11	9	5	7	10	8
Emmerton	(a)11	(a)3	11	4	2		5	
Threemile Slough-SR		2	3	3	2		2	3
Rio Vista Bridge	7	10	12	7	3	(a)5	8	7
Isleton Bridge	3	5	3	3	1	2	2	2
	San Joaquin River Delta							
Antioch	20	19	20	19	21	23	25	26
Millers Harbor	36	31	31	30	39	40	39	40
Jersey Island								
Threemile Slough-SJR		2			8	17	18	(a)20
Oulton Point					14	16		17
San Andreas Landing	14	5	10	15	4	10	13	(a)16
Opposite Central Landing	9	6	6		3	8	4	8
Witch Slough	(a)30	38	39	45	41	48	43	45
Abb Ferry	(c)15	(e)21			19		(r)20	(r)21
West Contra Costa I.D.	(b)43	45	(a)36	(a)60	63	62	66	47
Clifton Court Ferry								22
Mossdale Bridge	14	11	(a)11	(a)13	14	7	13	13
Vernalis (g)								

(*) Presumed.
(a) Taken on Low High Tide.
(b) Taken on following day.
(c) Taken two days later.

(d) Taken over one hour off scheduled time.
(e) Taken on preceding day.
(f) Taken two days earlier.
(g) Station located above tidal action.

TABLE 234
 SALINITY OBSERVATIONS, SACRAMENTO-SAN JUAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours after
 high high tide
 parts per million

Station	February 1956							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo, and Suisun Bays							
Point Orient	5700	7460				9860	7330	
Point Pinole		1600		6230		4430		
Point Davis	531	2280	2690	2300	3950		470	
Grand View	542		770	990	3270	942	2630	
Crockett	486	1180	705	3020	4070		168	
Benicia	(a)20	58	1700	274	2820	2880	30	
Martinez	30	151	341	560	908	1890	29	
West Suisun	25				144	2070	55	
Innisfail Ferry	176	259	376	420	454	269	397	
Port Chicago	24	19	26	25	260	224	19	
O. & A Ferry	*14		15	17	18	23	12	
Pittsburg	26		25	24	25	25	12	
	Sacramento River Delta							
Collinsville	12	18	23	(a)15	19	15	7	
Ematon		15	16	(a)9		10		
Threemile Slough-SR	4	7	7	14	13	12	4	
Rio Vista Bridge	9	6	10	8	14	11	5	
Isleton Bridge	3	6	5	7	6	4	2	
	San Joaquin River Delta							
Antioch	27	23	23	25	29	27	24	
Millers Harbor	41	47	(b)34	(ab)35	38	36	37	
Jersey Island				(a)19		19	21	
Threemile Slough-SJR	19	20	19	(a)22	25	23	(a)25	
Oulton Point	23	19	23	(a)19	23	22	18	
San Andreas Landing	5	15	(a)11	(a)7	8	11	6	
Opposite Central Landing	9	8	7	(a)7	8	11	6	
Dutch Slough	42	36	(a)41	(a)40	39	50	41	
Webb Ferry	25	(d)27	(e)24	22	28	30	(b)25	
East Contra Costa I. D.								
Clifton Court Ferry								
Mossdale Bridge								
Vernalis (e)								
	March 1956							
	San Francisco, San Pablo, and Suisun Bays							
Point Orient	5930	8760	9870	12000	12000	12100	12700	11700
Point Pinole		1460	2730	6120	4300	8070	6020	5020
Point Davis	990	(b)2120	2860	3770		5900	6700	
Grand View	2250	315	2370	5320	3960	4790	4730	3960
Crockett	998	54	1760	2600	2710	3020	2450	3390
Benicia	138	64	2400	(a)772	(a)1458	1150	(a)85	1160
Martinez	31	48	57	52	823	976	72	222
West Suisun	36		205		300	331	(a)309	314
Innisfail Ferry	(a)112	17	21	58	147	210	56	389
Port Chicago	21	13	15	14	16	14	12	12
O & A Ferry	8		15	(a)24	17	(b)21	(ab)18	16
Pittsburg	20		(b)20					
	Sacramento River Delta							
Collinsville	9	9	16		15	12	(a)9	12
Ematon	7	6			14		9	
Threemile Slough-SR	5	6	8	9	8	6	10	6
Rio Vista Bridge	8	9	7	11	10	7	7	7
Isleton Bridge	4	4	4	5	4	8	3	3
	San Joaquin River Delta							
Antioch	25	28	36	24	20	23	(a)23	(a)22
Millers Harbor	32	38		34	29	28	30	28
Jersey Island				(a)16		15	(a)15	16
Threemile Slough-SJR	10	53	18	19	19	24	(a)17	15
Oulton Point	21	21	20	(a)19	20	6	(a)16	17
San Andreas Landing	21	8	8	(a)8	6	7	(a)5	5
Opposite Central Landing	5	7	43	Lost	39	37	36	39
Dutch Slough	47	48	30	29	22	22	(a)27	(a)25
Webb Ferry	26	25	54	65	61	51	80	104
East Contra Costa I. D.	58	(b)62					74	112
Clifton Court Ferry							110	86
Mossdale Bridge			(a)30	41	70	65		
Vernalis (e)	23	30						

(e) Presumed
 (a) Taken on Low High Tide.
 (b) Taken on following day.
 (c) Taken two days later.

(d) Taken over one hour off scheduled time.
 (e) Taken on preceding day.
 (f) Taken two days earlier.
 (g) Station located above tidal action.

TABLE 234

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

Samples taken by local observers approximately one and one-half hours after high high tide parts per million

Station	April 1956							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Orient	11600	(e)9630	13900	13500	12600	(e)13700	12600	(a)12600
Point Pinole		(a)7650	(a)11000					
Point Davis	3430	(e)8320	9880	7250	5200	8000	6300	4700
Grand View	6260	(e)7100	6440	6430	6550	6800		7650
Crockett	2610	(d)5180	8500	6900	5920	5700	(a)4400	4120
Benicia	633	4410	5550	4290	2450	4400	4300	1700
Martinez	425	(a)2590	(a)2700	(a)422	1190	(a)572	(a)518	1030
West Suisun	112		3490	910	593		634	(a*)934
Innisfail Ferry	329	(a)304	(a)275		285		(a)242	(a)284
Port Chicago	18	1970	(e)2730	685	440	920	995	169
O & A Ferry	19	13	15	16	17	16	19	16
Pittsburg	17	(a)16		(b)21	(b)18		(a)25	
Sacramento River Delta								
Collinsville	14	(a)11	(a)12	11	16		(a)11	
Emmaton	8		(a)11					9
Threemile Slough-SR	6	16	10	10	8	17	9	6
Rio Vista Bridge	7	13	8	6	7	7	5	7
Isleton Bridge	5	5	5	6	5	6	4	4
San Joaquin River Delta								
Antioch	20	(a)19	(a)20	(a)26	26	(a)30		28
Millers Harbor	27	(a)27	(a)29	29	34	(a)40	(a)38	39
Jersey Island								
Threemile Slough-SJR	11	(a)18	(a)22		28	(a)26	(b)25	25
Oulton Point	11		25	21	105	(a)32	25	25
San Andreas Landing	20	(a)9	(a)24	23	16	(a)26	28	66
Opposite Central Landing	20	(a)9	(a)8	18	11	(a)9	(a)5	11
Dutch Slough	20	(a)45	(a)44	50	60	(a)59	53	52
Webb Ferry	20	(a)28	(a)25	29	31	32	32	33
East Contra Costa I. D.	100	(a)127	(a)92	107	109	69	56	70
Clifton Court Ferry	43	66	82					
Mossdale Bridge	41	74	66	34	(b)30	37	25	19
Vernalis (g)								
May 1956								
San Francisco, San Pablo, and Suisun bays								
Point Orient	7950	(e)10300	12200	10200	9900		10900	7720
Point Pinole								
Point Davis	3860	6600	5070	4180	7060	5680	*3540	3190
Grand View	7300		6450	7100	6280	7160	6200	6040
Crockett	(a)4700	5800	(a)1240	2790	(a)4200	4660	3600	2630
Benicia	3690	4900	2490	2210	(b)3510	3580	1020	1800
Martinez	(a)1150	(a)1660	(a)184	2030	(a)727	(a)154	(a)42	(a)486
West Suisun	725	1780	347	44	(b)1020	1060	117	39
Innisfail Ferry	(a)300		(a)188	(a)175	(a)160	(a)139	(a)124	102
Port Chicago	195	265	409	123	(b)35	135	(a)16	11
O & A Ferry	16	20	15	13	11	21	10	9
Pittsburg		(a)29	(a)20	15	(ab)13	(a)14	(ab)12	
Sacramento River Delta								
Collinsville		(a)8		13		(a)6	7	(a)6
Emmaton		9	8	8		7	9	
Threemile Slough-SR	(b)12			13	(b)8		(d)5	7
Rio Vista Bridge	(b)10	6	5	5	(b)10	9	3	5
Isleton Bridge	(b)7	4	3	4	(b)5	5	7	(b)4
San Joaquin River Delta								
Antioch	(a)33	(a)28	(a)24	18	(a)13	(a)13	(a)15	(a)17
Millers Harbor	(a)37	(a)35	(a)32	31	(d)18	17		
Jersey Island								
Threemile Slough-SJR	(a)27		(a)16		(a)11	(a)12	(a)12	(a)10
Oulton Point	(a)25				(a)14		13	(a)11
San Andreas Landing	(a)13	(a)21	17	14	(a)6	(a)12	13	(a)7
Opposite Central Landing	(a)5	(a)5	(a)4	7	(a)5	(a)5	8	(a)4
Dutch Slough	(a)5	(a)41	35	25	(a)19	(a)20	23	(a)19
Webb Ferry	(a)25	(a)25	24	24	(ad)14	(a)13	17	(a)17
East Contra Costa I. D.	(a)50	(a)47	24	22	(ab)25	(ab)25	18	(a)14
Clifton Court Ferry	(a)21	14	10			18		(a)12
Mossdale Bridge	(a)22	12	13	16	(a)19	13	12	(a)23
Vernalis (g)								

(e) Presumed.
 (a) Taken on Low High Tide.
 (b) Taken on following day.
 (c) Taken two days later.

(d) Taken over one hour off scheduled time.
 (e) Taken on preceding day.
 (f) Taken two days earlier.
 (g) Station located above tidal action.

TABLE 234

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours after
 high high tide
 parts per million

Station	June 1956							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo, and Suisun Bays							
Point Orient	10700							
Point Pinole	(a)8400				(e)11600	14000	13600	13300
Point Davis	*2150	3690	5560	6230				
Grand View	5550	6850	7110	7600	(e)6570	8050	(a)6640	
Crockett	3740	4330	5090	5730	(e)8520		(a)8000	7800
Benicia	2940	(b)3110	4620	5730	(e)5710	(a)5520	5800	
Martinez	840	(a)84	(a)94	2560	4900	5940	5120	5850
West Suisun	1190	438	800	(a)1130	(a)1440	(a)539	(a)2130	(a)3750
Innisfall Ferry			800	864	2140	2340	1280	
Port Chicago	(b)1060	707	(a)83		72		(a)132	103
O & A Ferry	(b)16	11	800	374	1790	1780	1240	4330
Pittsburg	(a)12	(ab)11	12	11	12	17	19	47
			(a)14	(a)11	(ab)13	(a)14	(b)24	
	Sacramento River Delta							
Collinsville	(a)7	(ae)6	9	(a)10	(a)36		12	
Emmerton			7	(a)7			(a)9	(a)15
Threemile Slough-SR	(b)5	9	(a)9	8			9	7
Rio Vista Bridge	(b)9	6	7	(b)6	7	8	8	(a)12
Isleton Bridge	(b)5	10	4	(b)9	7	8	7	(b)7
	San Joaquin River Delta							
Antioch	(a)15	(a)11	(a)11	(a)13	(a)12	(a)14	15	(a)15
Millers Harbor		(a)15	14		(a)14	(a)18		(a)14
Jersey Island					(a)12	(a)10		
Threemile Slough-SJR		(a)9	(a)9	(a)9			(a)14	
Oulton Point		(a)10			(a)12	(a)10	(a)14	
San Andreas Landing	(a)7	(a)9	9	(a)10	(a)12	(a)12	16	(a)13
Opposite Central Landing		(a)5	7	(a)7	(a)9	(a)12	11	(a)12
Dutch Slough	(a)13	(a)14	14	(a)17	(a)16	(e)16	19	(a)19
Webb Ferry	(a)12	(a)14	9	10	(a)15	(a)11	12	(a)10
East Contra Costa I. D.	(ab)27	12	14	(a)19	(a)22	22	20	(a)24
Clifton Court Ferry		11	4020	(a)14	17	22	22	(a)18
Mossdale Bridge	(a)9	8	9	(a)16	18	12	22	
Vernalis (z)						(ad)14	(ac)28	
	July 1956							
	San Francisco, San Pablo, and Suisun Bays							
Point Orient					(e)14400	(e)15000	14500	11200
Point Pinole		(e)9900	10200	11000				
Point Davis	8000	(e)7850	9230	10200	(e)10200	12600	10900	13200
Grand View	7700	(d)9540	10000		(e)12200	10400	10300	11200
Crockett	5730	(e)4730	5560	*4900	(e)5790	7900	10700	11600
Benicia		(a)4390	7700	(a)3550	(a)3840	(a)3840	6600	6070
Martinez	(a)2000	5040	3450	4680			6720	(a)4740
West Suisun	3290	(a)187	(a)507		(e)853	847	6200	6030
Innisfall Ferry	118	5020	4020	4140	(e)4940	4760	4840	5660
Port Chicago	3070	327	575	628	(e)405	767	1060	897
O & A Ferry	(b)50			(a)308		(ab)418	(a)612	401
Pittsburg								
	Sacramento River Delta							
Collinsville	(a)20	(a)12	126		(a)90	(a)174	(a)351	(a)286
Emmerton	(a)10	14	17	11	(a)15	(a)15	(a)16	(a)18
Threemile Slough-SR	9	8	13	(b)16	12	14	15	
Rio Vista Bridge	9	8	10	10	8	12	8	10
Isleton Bridge	6	8	8	7	8	12	5	9
	San Joaquin River Delta							
Antioch	(a)15	(a)22	(a)65	(a)61	(a)69	(a)141	(a)200	675
Millers Harbor	(a)16	(a)16	19	24	(a)31	(a)49	64	82
Jersey Island							93	
Threemile Slough-SJR	(a)16	(a)11	(a)14	17	(a)15	(a)21	(a)21	(a)26
Oulton Point		20	(b)19	(a)18	(a)19	(a)18	(a)21	(ad)20
San Andreas Landing	(a)16	(a)16	(a)14	(a)15	(a)15	(a)20	(a)18	
Opposite Central Landing	(a)8		(a)12	(a)11	(a)11	(a)11	(a)96	(a)12
Dutch Slough	(a)21	(a)21	22	(a)21	(a)26	(a)30	38	(a)52
Webb Ferry	(a)14	(a)14	17	(a)15	(a)16	(a)15	36	(a)36
East Contra Costa I. D.	(a)33	46	30	(ab)31	(a)35	32	26	(a)34
Clifton Court Ferry			32				25	(a)40
Mossdale Bridge	(a)25	61	73	(a)81	114	(a)147	137	(a)31
Vernalis (z)		62	(e)70	(e)79	(e)111			

(*) Presumed.
 (a) Taken on Low High Tide.
 (b) Taken on following day.
 (c) Taken two days later.

(d) Taken over one hour off scheduled time.
 (e) Taken on preceding day.
 (f) Taken two days earlier.
 (g) Station located above tidal action.

TABLE 234

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
 Samples taken by local observers approximately one and one-half hours after
 high high tide
 parts per million

Station	August 1956							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo, and Suisun Bays							
Point Orient	15300	(e)16100	16400	(a)14500	(e)16200	15300	16600	15900
Point Pinole			14300	12800	13300	12200		12600
Point Davis	13300	(b)11700	13300	(e)11800	(e)10400	12200	12200	12700
Grand View	10700	11200	11300	11600	(e)11800	12200	11900	12200
Crockett	*10900	11900		11000	(e)10400	11300		12200
Benicia	6500	7720	6600	7860	(e) 7250	6450	7290	6900
Martinez	(a)4540	(a)4360	6900	(a)6620	(a)5340	6710	6490	(a)5900
West Suisun	6700		7000	7580	(e)7280	5930	6930	7800
Innisfail Ferry	(a)1230	(a)1770	2110	2540	(a)2290		2710	2750
Port Chicago	6430	6560	5800	5880		5620	5820	7000
O & A Ferry	893	1030	1330	1170	1890	1240	1670	1530
Pittsburg	(a)242	(ab)825	472	(ae)498	(a)955	(a)812	793	930
	Sacramento River Delta							
Collinsville	(a)270	(a)184		(a)542	(a)380		(a)302	
Emmaton	(ab)33	(a)27	25	23	25	(a)29	29	
Threemile Slough-SR	(b)16	20	22	26	25	24	27	31
Rio Vista Bridge	(b)7	7	9	9	13	9	12	12
Isleton Bridge	(b)8	7	10	10	10	13	8	11
	San Joaquin River Delta							
Antioch	(a)294	(a)237	350	(a)256	(a)287	(a)322	424	(a)213
Millers Harbor	(a)78	(ad)82	95	(e)107	(a)121	137	141	157
Jersey Island								
Threemile Slough-SJR	(a)32	24	(a)31	(a)42	(a)43			(a)64
Oulton Point	(a)30	(a)25	(a)36	(a)30	(a)34	(a)39	(a)41	(a)39
San Andreas Landing	(a)20	(a)19	18	(a)24	(a)24	(a)26	31	(a)32
Opposite Central Landing	(a)11	(a)11	(a)13	(a)14	(a)13	(a)17	(a)14	(a)19
Dutch Slough	(a)47	(a)44	(a)43	(a)56	(a)64	(a)70	71	(a)94
Webb Ferry	(a)30	(a)30	(a)45	(a)45	(a)32	33	(a)58	(a)56
East Contra Costa I. D.	(b)33	34	(a)34	(a)48	(a)44	55	(a)51	(a)55
Clifton Court Ferry			(a)18					
Mossdale Bridge	(a)71	62	(a)79	(a)122	128	111	(a)113	(a)114
Vernalis (g)	(b)69	(b)75	65			(e)106	(f)114	
	September 1956							
	San Francisco, San Pablo, and Suisun Bays							
Point Orient	(e)15600	16600		14800	14900	15000	14900	(e)15600
Point Pinole								
Point Davis		13800				10200		(e)11700
Grand View	(e)12500	12300	12500	13200	13200	13400	13400	(e)12900
Crockett	(e)12500	12800	10800	10000	10700	8940	*9440	(e)9800
Benicia	(e)8330	6820	5750	7400	5900	4900	6050	(e)8550
Martinez	(a)5030	(d)6100	5600	(a)5000	5030	5400	5630	(a)4630
West Suisun	(e)6350	7710	6530	6200		4300		(e)4480
Innisfail Ferry	(a)2530	2780	2860		2460		2040	(a)1790
Port Chicago		4880	5070	4500	4070	3400	4120	(e)4800
O & A Ferry	970	1160	1090	422	407	243	418	(e)132
Pittsburg	(ab)680	848		390	(b)428	167		
	Sacramento River Delta							
Collinsville	(a)410		(a)278	135	86	38	(a)33	(a)108
Emmaton		39	(a)33	(a)22	15		*15	
Threemile Slough-SR	34	41	31	(b)16	17	15	14	14
Rio Vista Bridge	10	11	12	(b)14	10	11	9	13
Isleton Bridge	10	13	11	(a)10	11	14	10	10
	San Joaquin River Delta							
Antioch	(a)258	354	204	122	115	106		(a)93
Millers Harbor	134	122	99	(b)56	55	(b)42	47	35
Jersey Island								
Threemile Slough-SJR	(a)50	58	36	(a)24	(d)25		25	
Oulton Point	(a)45	36		(a)22	27	25		
San Andreas Landing	(a)30	31	25	(a)26	23	29	(a)23	(a)23
Opposite Central Landing	(a)16	17	(a)12	(a)14			(a)16	(a)14
Dutch Slough	(a)96	(a)84	(a)76	(a)59	54	49	(a)41	(a)37
Webb Ferry	(a)57	(a)57	(a)48	(a)47	(a)30	(a)31	(a)26	
East Contra Costa I. D.	51	48	(a)57	(a)63	(ab)67	(a)89	(a)75	(b)72
Clifton Court Ferry								
Mossdale Bridge	125	(a)114	(a)93	(a)95	(a)80	(a)88	(a)83	(a)92
Vernalis (g)	(c)117	(c)88	(c)99	(b)88		(e)86	(e)81	*86

(*) Presumed.
 (a) Taken on Low High Tide.
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 (e) Taken on preceding day.
 (f) Taken two days earlier.
 (g) Station located above tidal action.

TABLE 240
SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
In parts per million

Samples taken at four-day intervals approximately one and one-half hours after high high tide.

Station	October 1956							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Orient	15700	17100	14600	14600	16500	16900	14000	16500
Point Pinole								
Point Davis								
Grand View	12400	12200	b 10400	11600	b 12300	13100	11300	
Crockett	10400	12400	12300	12400	11700	12300	12100	11700
Benicia		7540	9620		12700	12300	10500	d 11000
Martinez	*7360	7500	8040	7220	8410	8880	7620	10400
West Suisun			a 4400	5600	7360	7920	a 5090	5300
Innisfail Ferry			a 4950	3710		7820	5100	6000
Port Chicago	3500	5120	a 1690	1500			2300	1800
O & A Ferry	876	992	4000	4120	6610	6640	3050	6480
Pittsburg		988	397	316	1250	1520	819	1120
					621	74	a 418	273
Sacramento River Delta								
Collinsville		317	134	30	213	644	a 103	d 149
Ematon	14		16	12	11		a 16	
Threemile Slough Bridge	25	14	15	11	12	12	4	11
Rio Vista Bridge	9	7	7	10	6	10	10	7
Isleton Bridge	6	7	6	9	6	5	6	7
San Joaquin River Delta								
Antioch	117	148	116	72	128	165	a 116	150
Antioch Bridge	34	b 34	60	28	33	36	33	31
Jersey Island								
Threemile Slough	13		a 15	24			a 27	18
Oulton Point	a 24	a 25	a 23					
San Andreas Landing	a 23	a 30	a 27	26	24		a 30	26
Opposite Central Landing	13	a 17	a 12	14	20	a 11	a 12	18
Dutch Slough	a 37	a 33	a 35	38	35	a 36	38	
Webb Ferry	a 25	a 28	a 24	e 25	26	a 24		
E.C.C.I.D.	a 72	a 92	a 102	b 135	a 93	a 91	a 94	111
Clifton Court Ferry	a 50							
Mossdale Bridge	a 122	a 93	a 95	97	a 72	a 73	a 95	a 108
Vernalis (g)	121	a 95		e 103	f 86	c 84	87	104
November 1956								
San Francisco, San Pablo, and Suisun Bays								
Point Orient	15200	14700	13700	15800	16300	16500	15600	16800
Point Pinole								
Point Davis								
Grand View	12600	9400	10400		*12200	11400	11900	
Crockett	10000	11900	12000	11800	13600	11600	12000	
Benicia	7900	b 9200	9400	11800	11500	10000	10900	10900
Martinez	6130	7100	5600	d 7400	8690	7620	8450	8570
West Suisun			5600	d 6220	6170		5520	7540
Innisfail Ferry			a 4000	4450	5970	4020		5110
Port Chicago	3700	1600	a 1750		1820	1850		
O & A Ferry	457	2900	4120	4030	5800	4500	4490	5000
Pittsburg	142	237	404	1050	1180	508	326	
		a 80			135		110	
Sacramento River Delta								
Collinsville	128	40	56	51	252		70	48
Ematon	a 11							
Threemile Slough Bridge	13	11	10	10	21	10	13	10
Rio Vista Bridge	6	6	6	8	6	7	8	8
Isleton Bridge	6	5	6	10	4	7	5	5
San Joaquin River Delta								
Antioch	103	45	41	50	73	83	79	127
Antioch Bridge	31	31	32	30	30	b 33	35	a 36
Jersey Island								
Threemile Slough			a 26	16	24			
Oulton Point		a 28					27	32
San Andreas Landing	28	a 30	15	28	29	a 31	33	29
Opposite Central Landing	12	a 8	8	7	20	a 5	9	11
Dutch Slough	41	a 47	48	43	43	a 43	51	a 59
Webb Ferry								
E.C.C.I.D.	a, b 113	a 114	119	122	a 127	b 135	132	130
Clifton Court Ferry								
Mossdale Bridge	105	a 102	96	a 103	a 91	a 47	50	a 62
Vernalis (g)		98		e 101	f 105	b 59	b 68	

* Presumed.
a Taken after Low High Tide
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g Station located above tidal action.

TABLE 240

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

In parts per million

Samples taken at four-day intervals approximately one and one-half hours after high high tide.

Station	December 1956							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Orient	19000	14900	13600	d 14100	16800	15400	16300	
Point Pinole								
Point Davis	12400	10300		12500	12200		11300	11600
Grand View	11400	11400	11100	10500	10200	10900	10900	10200
Crockett		9460	b 9750	11400	12000	10700	10700	11100
Benicia	8470	6400	7120	a 5450	8510		7400	10100
Martinez	7010	5100	6250	8310	7580	5380	6760	7730
West Suisun	5410	4250			6680	4260		6400
Innisfail Ferry		2010	6050	2020	2370	2380		
Port Chicago	5160	3600	4130	6130	5750	4150	5010	5550
O & A Ferry	1160	670	237	1730	1440	559	427	1830
Pittsburg	280	255		1010		492	366	
Sacramento River Delta								
Collinsville	280			425	575		191	576
Emmaton	14	a 14		29				
Threemile Slough Bridge	15	26	13	15	16	16	14	19
Rio Vista Bridge	5	5	6	8	7	6	7	7
Isleton Bridge	7	5	5	13	6	6	6	6
San Joaquin River Delta								
Antioch	144	65	61	179	223	128	105	195
Antioch Bridge	38	39	a 42	43	44	43	b 44	b 45
Jersey Island								
Threemile Slough		a 29		39	d 31	31	26	18
Oulton Point								
San Andreas Landing	34	35	36	d 30	35	32	30	b 34
Opposite Central Landing	18	a 10	10	13	23	9	13	26
Dutch Slough	a 60	a 59	65	a 58	a 61	60	59	a 56
Webb Ferry								
E. C. C. I. D.	a, b 125	a 105	107	b 102	a 95	99	110	a 121
Clifton Court Ferry								
Mossdale Bridge	a 53	a 48	62	a 74	a 87	84	99	a 99
Vernalis (g)	c 71		b 75			e 67	83	
January 1957								
San Francisco, San Pablo, and Suisun Bays								
Point Orient	16100		16100	15900	16200	14000		15900
Point Pinole					11600			
Point Davis				12200		9540		10900
Grand View	10800	10800	10700	9750	10900	9930	9920	9310
Crockett	11200	a, b 9540	10000	12300	10200	*9560	9410	9570
Benicia	8350	7180	7340	9090	7310	6370	8010	6940
Martinez	6270	7140	7150	7530	*4300	4880	5540	5340
West Suisun	5490	4270	5490	6560	3860	3960	4890	3790
Innisfail Ferry	2220	2220	e 2250	2180		1980	1740	
Port Chicago	5490	4180	5780	7360		3240	4290	d 2780
O & A Ferry		628	799	1210	899	530	760	742
Pittsburg	c 306	299	161	264		371	b 184	137
Sacramento River Delta								
Collinsville	400	119	248	621	108	74	150	96
Emmaton					20	19	19	24
Threemile Slough Bridge	15	13	15	15	14	14	17	14
Rio Vista Bridge	9	7	6	10	10	11	10	8
Isleton Bridge	6	7	7	8	14	a 8	8	8
San Joaquin River Delta								
Antioch	180	109	124	389	119	95	93	88
Antioch Bridge	a, b 43	40	11	51	44	43	f 42	44
Jersey Island								
Threemile Slough	31			a 29	31	42		24
Oulton Point								
San Andreas Landing	34	32	27	*34	41	43	19	44
Opposite Central Landing	a 14	10	17	25	a 16	14	29	24
Dutch Slough	a 55	63	56	55	a 68	d 61	60	67
Webb Ferry								
E. C. C. I. D.	a 122	124	129	132	a 141	149	e 159	a 157
Clifton Court Ferry					a 113	110		a 123
Mossdale Bridge	a 97	92	92	a 97	a 100	107	a 114	a 134
Vernalis (g)				b 105		122		e 116

* Presumed.
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f Taken two days earlier.
g Station located above tidal action.

TABLE 240
SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

In parts per million

Samples taken at four-day intervals approximately one and one-half hours after high high tide.

Station	February 1957							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Orient	14700	15800		17100	15600	14800	13700	
Point Pinole								
Point Davis	10700	11100	11800	12300	12100		9160	
Grand View	9640	9920	9920	b 9560	9550	9710	9160	
Crockett	9440	9210		12500	12200	8970	9640	
Benicia		6770	10100	9030	8710	7270		3880
Martinez	4980	7970	8660	6360	6680	6770		2180
West Suisun	3700	4750	6570	7340	6400	4840		1290
Innisfall Ferry	1940	1870	2020	2700	2420			2550
Port Chicago	3350	5050	5850	6410	5200	5560		2600
O & A Ferry	725	535	1690	2100	1650	1130		218
Pittsburg		382	1300	679	436	544		142
Sacramento River Delta								
Collinsville	a 103	68	395	*803				
Emmaton	19	a 22			21	a, b 25		27
Threemile Slough Bridge	17	18	19	23	22	18		6
Rio Vista Bridge	9	9	10	9	10	9		4
Isleton Bridge	10	8	9	7	6	7		5
San Joaquin River Delta								
Antioch	91	78	242	374	305	221		90
Antioch Bridge	a 45	46	117	53	57	55		57
Jersey Island								
Threemile Slough	a 26	23						
Oulton Point	a 41				25	30		33
San Andreas Landing	a 46		48	46	a 45	39		28
Opposite Central Landing	14	22	40	29	23	12		d 6
Dutch Slough	a 70	71	67	68	68	70		78
Webb Ferry								
E.C.C.I.D.	a 160	157	b 178	a 174	170	161		
Clifton Court Ferry		127		a 134	116			139
Mossdale Bridge	a 119	152		a 101	116	145		a 174
Vernalis (g)	a 109	e 144	c 121	b 106		165		
March 1957								
San Francisco, San Pablo, and Suisun Bays								
Point Orient	9400	8820	8740	10700	11500		12400	13300
Point Pinole				5660	a 5110	3090		
Point Davis	2520			3490	a 1990	1390		
Grand View		8460	* 5730	4500	4230	4360	6090	8390
Crockett	1150	2750	1010	2000	1910	1620	4570	5060
Benicia	151	1760	119	1830	1820	1620	4920	
Martinez		140	77	82	a 66	130		5820
West Suisun	126	56	60	68		423	1800	a 2230
Innisfall Ferry	2040	918	272	271	a 297	46		1830
Port Chicago	35	23	b 17	29	27	328	356	a 341
O & A Ferry	13	9	12	11	12	22	134	257
Pittsburg	b 22	19	22	23	a 22	b 23	b 18	a 19
Sacramento River Delta								
Collinsville	14	8	5	11	8	12		
Emmaton	a 4	a 5	2	a 7	7	6	9	a 13
Threemile Slough Bridge	3	7	5	6	14	6	17	a 8
Rio Vista Bridge	6	4	4	4	6	6	11	7
Isleton Bridge	3	4	0	3	5	5	5	8
San Joaquin River Delta								
Antioch	35	32	25	24	28	26		a 29
Antioch Bridge	48	38	36	39	a 38	d 38	25	o 37
Jersey Island							38	
Threemile Slough	22	12		20	32	16		
Oulton Point				20	a 16			a 15
San Andreas Landing	20	12	20	24	a 20	23	22	a 21
Opposite Central Landing	a 3	7	2	6	6	7	10	a 8
Dutch Slough	a 85	84	76	83	79	72	72	63
Webb Ferry								
E.C.C.I.D.	a 207	173	e 224	221	207	551	185	b 159
Clifton Court Ferry		146		a 107	97			
Mossdale Bridge	a 139	102	107	a 87	68	45	a 50	94
Vernalis (g)	a 138	e 102	d 100			43	52	e 86

* Presumed.
a Taken after Low High Tide.
b Taken on following day.
c Taken two days later.
d Taken over one hour off scheduled time.
e Taken on preceding day.
f Taken two days earlier.
g Station located above tidal action.

TABLE 240
SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
In parts per million

Samples taken at four-day intervals approximately one and one-half hours after high high tide.

Station	April 1957							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Orient	11300	13400	13600	13600		11900	a 11900	14700
Point Pinole	x 8140		a 11200			a 11800		a 12300
Point Davis	e 8280	7620	e 9480				8510	a 12400
Grand View	a 6050	7620	e 10500	8920	10100	10200	9100	a 2220
Crockett	a 5650	7620	e 8500		7710	6990	7010	a 8240
Benicia	4470	6260	e 5420	7910	7100		5330	a 5740
Martinez	1768	1700	a 3220	a 3570	a 2470		a 2460	a 3800
West Suisun	1200	3670	3110	5420	3110	1970	3120	a 5370
Innisfail Ferry	a 370	a 329	a 363		698	a 578	a 544	a 539
Port Chicago	677	2680	f 2630	4620	3900	2420	3140	b 3970
O & A Ferry (h)	23	35	50	278	538	38	21	a 535
Pittsburg	a 22	28	a 30	a,b 203	b 163			a 144
Sacramento River Delta								
Collinsville	a 16	20	a 15		31	a 18	a 27	a 23
Emmaton	12	12	a,f 11	a 12	11	a 5	a 22	a 8
Threemile Slough Bridge	10	12	12		9	9	7	9
Rio Vista Bridge	12	9	9	6	5	b 6	5	5
Isleton Bridge	7	6	6	7	4		7	
San Joaquin River Delta								
Antioch	a 31		a 29	a 43	86	a 33	a 18	
Antioch Bridge	d 37	22	a 28	c 36	57	*b 21	a 16	20
Jersey Island	35	31	a 27	a 13	33			
Threemile Slough	a 23	23	a 18	a 11	11	a 14	a 12	a 9
Oulton Point	24		a 18					
San Andreas Landing	a 23	21	a 14	a 11	a 10	a 6	a 11	a 8
Opposite Central Landing	16	12	a 5	a 11	a 5	a 4	a 11	a 5
Dutch Slough	50	36	a 39	38	a 35	a 35	a 31	a 23
Webb Ferry			a 100	82	a 72	a 72	a 69	a 65
E. C. C. I. D.	132	129	82	62	56	a 89	66	47
Clifton Court Ferry	107	110	a 201	205	145	a 70	105	88
Mossdale Bridge	102	172	e 179	f 180	b 114	73	85	102
Vernalis (g)		e 169						
May 1957								
San Francisco, San Pablo, and Suisun Bays								
Point Orient	15000	14400	15100	15300	15000	11300	c 8750	12500
Point Pinole				a 11700		d 7280		
Point Davis			e 10700	7910	7500	3820	e 2560	3390
Grand View	a 9370	9530	e 9970	9970	9710	10200	9350	
Crockett	a 8290	9170	e 9950	8170	7000	b 3880	e 2910	3110
Benicia	5500	6280	e 4060	4100	3650	1230		1090
Martinez		2690	a 2650	a 3420	a 1520	a 506	a 85	a 255
West Suisun	4680		e 3600	3640	1680		e 108	221
Innisfail Ferry	a 584	799	785	a 824	811		a 430	a 389
Port Chicago	4870	3290	b 2870	3670	2490	96	13	
O & A Ferry (h)	175	352	e 158	186	80	21		
Pittsburg	a 75	161			87	a 6	a 8	
Sacramento River Delta								
Collinsville	a 49	90	a 16	a 18	24	a 7		a 5
Emmaton	a 8	a 7	8	a 9	9	a 9	a 6	a 8
Threemile Slough Bridge	7	7	8	8	8	4	4	6
Rio Vista Bridge	4	6	7	7	8	b 3	4	6
Isleton Bridge	4	5	5	6	6	b 2	1	2
San Joaquin River Delta								
Antioch	a 28	52	a 47	a 33	22	a 12	a 13	a 15
Antioch Bridge	*20	24	a,e 35	30		a,b 9	10	43
Jersey Island	a 13	19	a 14	a 12	11	a 14	a 11	
Threemile Slough		13	a 6		14	a 13	a 11	a 16
Oulton Point					a 12	a 11	a 10	11
San Andreas Landing	a 10	6	a 9	9	a 10	a 8	a 13	a 14
Opposite Central Landing	8	8	a 7	a 7	6	a 2	a 3	a 5
Dutch Slough	19	19	a 20	a 19	20	a 18	a 19	a 16
Webb Ferry			a 14	40	38	a,b 65	60	62
E. C. C. I. D.	a,b 86	a 57	35	33		a 49	42	43
Clifton Court Ferry	53	35	a 132	135		a 23	27	35
Mossdale Bridge	124	152	114	136	e 110	e 32	f 35	b 38
Vernalis (g)	b 137	b 148						

* Presumed.
a Taken after Low High Tide.
b Taken on following day.
c Taken two days later.
d Taken over one hour off scheduled time.

e Taken on preceding day.
f Taken two days earlier.
g Station located above tidal action.
h Effective April 28, 1957, taken from Spoonbill Creek at railroad crossing.

TABLE 240
SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
In parts per million

Samples taken at four-day intervals approximately one and one-half hours after high tide.

Station	June 1957							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Orient	12400	12100	e 11000	12900				
Point Pinole		a 8230	a 8220	a 8230				
Point Davis	3500	7160	e 6500	6640	9240	9700	e 13300	12600
Grand View	7450	6410	a,b 3280	4830	8430	8810	e 9180	9320
Crockett		3790	e 1210	1850	7810	8140	e 12100	11900
Benicia			a 536	a 1470	3620	5790	e 4950	8650
Martinez	755		a 955		1880	*3290	e 5360	a 6150
West Suisun	a 73	a 1040	a 222	d 150	1990	4810	8090	
Innisfail Ferry	252	776	a 1550	630	148	258	504	
Port Chicago		a 403	12	17	2330	4930	6390	6320
O & A Ferry (1)	33	10	a 12	b 21	19	310	2430	1920
Pittsburg	9	a,b 11				a,b 142	691	a 1190
Sacramento River Delta								
Collinsville			a 11	a 7				
Emmaton	8	14	a 9	a 8	23	a 17	233	a 564
Threemile Slough Bridge	6	a 5	7	8	14	b 11	15	a 41
Rio Vista Bridge	5	b 5	4	5	9	b 9	a 11	29
Ialeton Bridge	20	b 6	6	5	6	b 7	7	8
	4	b 4				b 7	8	2
San Joaquin River Delta								
Antioch			a 14	16	16			
Antioch Bridge	10	a 13	15			a 25	192	a 422
Jersey Island	9	a 13	a 14	16	15	a 22	a 103	a 141
Threemile Slough		a 21	a 14		16		a 22	a 35
Oulton Point	a 12	a 16	a 15	a 15	a 17		13	a 15
San Andreas Landing	12	a 13	a 14	a 8	a 12	a 13	14	22
Opposite Central Landing	12	a 12	a 4	a 5	a 6	a 7	11	a 10
Dutch Slough	5	a 5	a 22	20	a 24	a 8	8	a 9
Webb Ferry	17	a 24				a 24	24	26
E.C.C.I.D.								
Clifton Court Ferry	59	b 52	52	49	48	a 54	35	30
Mossdale Bridge		a 18	24	25	a 51		a 29	35
Vernalis (g)	50	b 16	12	42	a 50	a 84	108	134
	c 7		b 13	41	48	e 89	109	f 116
July 1957								
San Francisco, San Pablo, and Suisun Bays								
Point Orient	h 16300	h 16400	c,h 16300	h 16500	h 17400	h 17200	c,h 17400	19100
Point Pinole						a,h 15000	a 15900	
Point Davis								
Grand View								
Crockett	h 9720	h 9920	e,h 10200	h 11300	d 12900	h 12400	e,h 12800	13500
Benicia	h 10700	h 13400	a,h 11500	a,h 11700		h 14100	a 13700	
Martinez	h 8560	h 8240	h 9720	h 9580		h 10700	c 10100	11300
West Suisun	h 5850	a,h 6790	a,h 6910	a,h 6650	h 9440	a,h 9280	a,h 7700	8950
Innisfail Ferry	h 6710	h 7350	h 9040	h 8570	h 9300	h 9980	h 10600	a 5130
Port Chicago		*h 1950	h 3400	a,h 3550	h 3910	h 4520	a,h 5090	8340
O & A Ferry (1)	h 5040	h 6380	h 8390	h 2880	h 8250	h 9100	h 9050	h 3450
Pittsburg	h 1550	h 2280	h 2610	h 1780	h 3090	h 3890	h 3730	a 3050
	h 976	a,h 977	a,h 1700	a,h 1780	h 1900		a 2620	
Sacramento River Delta								
Collinsville								
Emmaton	a,h 944	a,h 856	a,h 1020	*a,h 1450	h 1870	a,h 1860	a 1890	a 2690
Threemile Slough Bridge	a,h 24	h 109	a,h 62	h 322	a,h 205	b,h 388	a 88	387
Rio Vista Bridge	h 25	b,h 29	h 9	h 61	h 67	b,h 122	h 220	10
Ialeton Bridge	h 7	b,h 8	h 8	h 9	h 12	b,h 10	h 11	8
	h 7	b,h 10	h 8	h 9	h 10	b,h 8	h 8	
San Joaquin River Delta								
Antioch	h 455	a,h 628	a,h 482	h 693	h 1690	a,h 991	h 1630	1850
Antioch Bridge					h 880	b,h 1290	a 262	1170
Jersey Island		a,h 131			h 384	b,h 144	a 144	a 435
Threemile Slough		a,h 19	a,h 26	a,h 33	a,h 84	a,h 67	a 149	a 180
Oulton Point	a,h 16	a,h 17	h 51	h 56	h 63	a,h 50	31	a 51
San Andreas Landing	a,h 11	a,h 12	a,h 13	a,h 15	a,h 26	a,h 24	a 12	a 12
Opposite Central Landing		a,h 8	a,h 9	h 10	a,h 13	a,h 12	a,h 194	a 217
Dutch Slough			a,h 51	h 85	a,h 93			
Webb Ferry								
E.C.C.I.D.								
Clifton Court Ferry	a,h 32	b,h 26	b,h 49	h 23	a,h 24	b,h 28	34	51
Mossdale Bridge	a,h 23		h 139	h 20	a,h 25		h 33	h 40
Vernalis (g)	a,h 111	a,h 136	h 20	h 169	a,h 172	a,h 174	161	a 168
	114	e 41	e 137	f 156	b 167	b 151	165	152

* Presumed.
a Taken after Low High Tide.
b Taken on following day.
c Taken two days later.
d Taken over one hour off scheduled time.
e Taken on preceding day.
f Taken two days earlier.
g Station located above tidal action.
h Taken two hours early.
i Taken from Spoonbill Creek at railroad crossing.

TABLE 240
SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS
In parts per million

Samples taken at four-day intervals approximately one and one-half hours after high high tide.

Station	August 1957							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Orient	18000	e 18500	17500	16900	17800	a 17800	17200	17100
Point Pinole	a 16700	a 17300		16300		a 15800	a 15400	
Point Davis			14800		16400	e 16200	b 16300	14900
Grand View	13400	e 13700	14500	a 13700	15000		a 14500	15100
Crockett	14700	13100	11900	10400	11300	10800		11900
Benicia	13900	11600	10400	9220	a 8140	a 7740	a 9230	*8810
Martinez	a 7940	a 7910	a 8970	9220	9920	10600	11300	
West Suisun	11800	10200	10400	9920	a 5050	*5230	a 5150	a 5280
Innisfall Ferry	a 4470	a 5230	5810	5440	a 5050	10200		8400
Port Chicago	a 9460	10200	9680	8160	9680			
O & A Ferry (1)	h 3540	e, h 3920	h 3800	h 3210	h 3700	a 2460	a 2390	
Pittsburg	2070		a 2080	3000	a 2280			
Sacramento River Delta								
Collinsville	a 2320	a 2200	a 2560		d 1920	a 2000	2640	452
Emmaton	a 235	a 258	a, b 346	338	412	a 154	a 434	109
Threemile Slough Bridge	277	232	186	159		125	159	8
Rio Vista Bridge	11	9	10	10	9	9	10	8
Isleton Bridge	b 5	8	7	10	b 7	8	9	8
San Joaquin River Delta								
Antioch	1760	a 1350	1140	579	d 1090	a 1110	a 1310	1130
Antioch Bridge	1470	920			1340	a, b 266	1360	
Jersey Island	a 257	a 263	b 602	485			a 355	a 124
Threemile Slough	a 102	a 95	a 153	a 158		d 159	a 136	a 72
Oulton Point	a 93	a 111	186	a 123	a 80	a 88	a 37	a 21
San Andreas Landings	a 30	a 40	44	a 47	a 34	a 38	a 12	a 10
Opposite Central Landing	a 9			a 12	a 10	a 9	250	a 171
Dutch Slough	a 185	190	a 223	d 196	a 194	a 185		
Webb Ferry	a 62	a 67	69	a 77	d 83	a, b 87	83	93
E. C. C. I. D.	a 31			a 62				
Clifton Court Ferry	a 172	155	156	a 146	a 170	148	161	a 160
Mossdale Bridge	182	152	e 152	e 139	c 133	b 134	b 142	144
Vernalis (g)								
September 1957								
San Francisco, San Pablo, and Suisun Bays								
Point Orient		a 15600	16000					a 13000
Point Pinole								14300
Point Davis			15200		14900	14200	14400	9940
Grand View	14300	14800	b 14100	13500	13100	12900	d 13200	8050
Crockett	b 14800	12800	11100	11300	11400	6790	8970	a 5200
Benicia	12700	10100	8810	8780	a 6210	a 6580	9570	5760
Benicia	a 7470	a 7780	8810	8780	a 8240	7100	7910	3170
Martinez	a 8740	a 6160	9320	4880	a 4910		3260	4460
West Suisun	a 5460	a 5510	7880	7730	7060		6010	
Innisfall Ferry	9070	8330	3020	a 1150			1130	218
Port Chicago		3360						
O & A Ferry (1)		a 1750						
Pittsburg								
Sacramento River Delta								
Collinsville	a 1510		98	a, *1050		a 277	a 378	331
Emmaton	b 175		55	a 27	b 25	32	a 20	13
Threemile Slough Bridge	b 101	57	11	a 30	b 25	17	14	11
Rio Vista Bridge	b 10	10	11	11	b 11	11	9	6
Isleton Bridge	b 10	11	11	9	b 9	9	9	7
San Joaquin River Delta								
Antioch	a 957	a 955	952	749	a 289	a 342	444	a 175
Antioch Bridge	a, *672	*847	694	318	b 255	249	223	141
Jersey Island	a, b 160			a 92	a 65		70	
Threemile Slough	a 115	a 53	76	a 36	a 30		a 21	a 19
Oulton Point	a 76	a 75	60	a 40	a 26	33	28	a 22
San Andreas Landings	a 24	a 25	28	a 21	a 21	a 18	16	a 14
Opposite Central Landing	a 11	a 11	a 12	a 14	a 14	a 10	a 8	a 7
Dutch Slough	a 151	d 150	a 136	a 113	a 84	a 71	a 55	a 44
Webb Ferry	b, d 84	d 88		d 78	d 82	b, d 88	d 80	a 74
E. C. C. I. D.		62	a 60		a 59	53	52	a 49
Clifton Court Ferry	a 148	139	a 142	a 140	a 134	115	a 131	a 118
Mossdale Bridge	b 122	153	154	e 137	e 133	f 138	b 129	b 104
Vernalis (g)								

* Presumed.
a Taken after Low High Tide.
b Taken on following day.
c Taken two days later.
d Taken over one hour off scheduled time.
e Taken on preceding day.

f Taken two days earlier.
g Station located above tidal action.
h Taken two hours early.
i Taken from Spoonbill Creek at railroad crossing.

TABLE 401
SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS*
In parts of chloride per million parts of water

Station	October 1957							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo, and Suisun Bays							
Point Orient			13800		10100	10900		
Point Pinole		a 14000	13200	f 11100	11700		11300	11000
Grand View	11200							
Crockett	10800	9920	10100	8100	b 7700			
Benicia	8290	7000	7800	5850	4400	5900	5870	4120
Martinez		6120	5010	a 4330	3730	a 3580	b 2970	2430
West Suisun	6080	4760	4280	3580			2210	
Innisfail Ferry	3040	b 2830	2330	c 2270		1400	1120	1470
Port Chicago	4950	3970	4790	b 4080	1500	3100	2750	
Spoonbill Creek	800	360	930	571				
Pittsburg	c 317				f 42	f 100	b, f 41	32
	Sacramento River Delta							
Collinsville	b 220	57	69		3	22	b 24	35
Emmaton	f 10	11	11	9	9	b 9	9	10
Threemile Slough Bridge	f 12	11		11	10	12	10	8
Rio Vista Bridge	f 8	8	8	6	4	13	6	6
Isleton Bridge	f 6	13	4	8	7	8	7	7
	San Joaquin River Delta							
Antioch	c 124	101	97	b 68	31	32	28	26
Antioch Bridge	f 122	79	78	62	5	29	29	23
Jersey Island	b 30			b 24		22		
Threemile Slough	b 15	16	17	b 14	6		18	16
Culton Point	b 16	20	22	b, f 17	7	18	19	21
San Andreas Landing							b 23	24
Opposite Central Landing	b 8	c 10		b 8	7	12	b 9	9
Dutch Slough	b 38	c 36	b 34	b 33	8	32	33	34
East Contra Costa I. D.	f 71	83	b 82	b 55	65	69	b 75	85
Clifton Court Ferry								
Mossdale Bridge	c 95	b 94	b 100	b 70	10	b 83	b 83	88
Vernalis (h)	e 104	d 123	d 108	g 68	11	86		87
	November 1957							
	San Francisco, San Pablo, and Suisun Bays							
Point Orient		11800		10500	10300	11000		
Point Pinole		10500	10700		9600	10200		9750
Grand View	11130		8250	8760		8490		
Crockett			5850	5170		6710	5000	6310
Benicia	7300	7010	5480	4040	2060	4470	b 2500	3360
Martinez	4250	4250	4550				1820	
West Suisun				b 1560			b 1140	
Innisfail Ferry		1420		2390	1800	a 2400		e 2400
Port Chicago		3190	3950					
Spoonbill Creek								
Pittsburg	48	144	1200	f 72	f 36	f 75	b, f 34	109
	Sacramento River Delta							
Collinsville	25	16	b 20	45	20	26	c 19	25
Emmaton	8	11	b 9	11	15	11	b 11	8
Threemile Slough Bridge	8	11	18	8	9	12	8	
Rio Vista Bridge	8	7	6	6	5	7	9	5
Isleton Bridge	6	6	5	6	5	6	7	5
	San Joaquin River Delta							
Antioch	26	28	36	40	29	28	b 31	27
Antioch Bridge	25	23	33	30		29	25	
Jersey Island				g 27	30	26	b 26	
Threemile Slough	17	18	19	25	25		26	20
Culton Point	19	b 21	20	24	a 25	18	21	22
San Andreas Landing	23	22	b 27	26	24	27	b 29	25
Opposite Central Landing	17	12	b 9	12	11	b 9	b 8	
Dutch Slough	31	36	37	38	42	b 48	a 44	a 47
East Contra Costa I. D.	89	94	b, f 108	110	115	b 122	b 118	116
Clifton Court Ferry								
Mossdale Bridge	80	b 92	b 65	59	70	b 67	b 77	76
Vernalis (h)		84	g 77	f 64	f 71			75

* Samples taken at four-day intervals approximately one and one-half hours after high-high tide.

a Presumed.

b Taken after low-high tide.

c Taken over one hour off scheduled time.

d Taken two days earlier.

e Taken on preceding day.

f Taken on following day.

g Taken two days later.

h Station located above tidal action.

TABLE 401
 SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS*
 In parts of chloride per million parts of water

Station	December 1957							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Orient								
Point Pinole	10700	13100	10900	11400				7790
Grand View	9470					9100	8840	8040
Crockett		9470	9250	10700	f 9080	6700	b 3940	
Benicia	7750	8450	3770	7060	8160	c 12100	2760	5180
Martinez	5470	5100	5530	4940	6350	2400	b 999	
West Suisun			3940		5700	1180	706	
Innisfail Ferry		1450	1510	1640			c 1330	1130
Port Chicago	4600		3250	3770		904	208	3090
Spoonbill Creek				611	631		11	235
Pittsburg	a 209	230	140	f 475	698	f 34	f 24	17
Sacramento River Delta								
Collinsville	18	23		42	216	c 12	11	9
Ematon	7	b 7	b 10	11	12	b 11	8	9
Threemile Slough Bridge	7	10	7	6	14	6	13	13
Rio Vista Bridge	5	8	7	c 10	8	6	8	5
Isleton Bridge	6	6	7	6	5	4	5	4
San Joaquin River Delta								
Antioch	27	67	66	76	83	40	29	26
Antioch Bridge	26	40	c, f 47		70	37	27	23
Jersey Island			b 29					
Threemile Slough	17	23	b 17	13	c 17	23	22	22
Culton Point	f 23	b 25	b 24	c 26	26	22	17	c 23
San Andreas Landing	27	31	b 21	27	25	23	19	16
Opposite Central Landing	12	c 13	b 7	7	14	6	2	3
Dutch Slough		c 51	b 51	49	49	51	55	58
East Contra Costa I. D.	113	b 109	b, f 103	99	103	113	116	119
Clifton Court Ferry								
Mossdale Bridge	b 78	b 64	b 70	66	b 78	b 73	69	91
Vernalis (h)	f 74			e 66	e 80	g 79	c, f 91	
January 1958								
Station	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Orient								
Point Pinole	10400		9420	8520		8470		
Grand View	6630	7390	7150	7160	7060	6810	5890	4240
Crockett	8200	6660	8000	5220	5940	5090	6300	3680
Benicia				4240	4830		4940	2270
Martinez	3400	2680	3690	1600	2590	1150	3440	2360
West Suisun	4120	1060	1220	840		188	e 988	
Innisfail Ferry	1160		832	860	802	1050	985	
Port Chicago	b 3670	1180		1050	837	b 129	2590	715
Spoonbill Creek	410	26	22	36				
Pittsburg	31	15	17	f 32	29	b, f 28	26	63
Sacramento River Delta								
Collinsville	17	5	17	14	16	17	19	16
Ematon	b 10	b 6	10	9	15	b 13	b 14	20
Threemile Slough Bridge	c 7	3	9	14	11	8	18	8
Rio Vista Bridge	4	4	5	10	8	8	13	9
Isleton Bridge	3	2	4	7	6	6	8	9
San Joaquin River Delta								
Antioch	27	27	26	34	34	35	35	44
Antioch Bridge		23	36	32	31	32	38	42
Jersey Island	33		36					
Threemile Slough	26	19	25	34	15	b 21	30	32
Culton Point	16	b 27	26	28	b 37	40	36	36
San Andreas Landing	27	21	15	32	34	40	13	13
Opposite Central Landing	14	b 6	8	7	10	b 10	15	9
Dutch Slough	60	b 64	63	77	77	b 99	77	110
East Contra Costa I. D.	127	119	150	162	b 157	b 154	170	333
Clifton Court Ferry		b 91	126		b, c 75	b 92		
Mossdale Bridge	b 77	b 115	106	96	b 75	b 95	82	122
Vernalis (h)	f 119				e 76	e 89	f 146	f 124

* Samples taken at four-day intervals approximately one and one-half hours after high-high tide.
 a Presumed.
 b Taken after low-high tide.
 c Taken over one hour off scheduled time.
 d Taken two days earlier.
 e Taken on preceding day.
 f Taken on following day.
 g Taken two days later.
 h Station located above tidal action.

TABLE 401
 SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS*
 In parts of chloride per million parts of water

Station	February 1958							
	2	6	10	14	18	22	26	
San Francisco, San Pablo, and Suisun Bays								
Point Orient				2450	c 2990			
Point Pinole		3380						
Grand View	c 3580	1670	539	490	1620	394	286	
Crockett	4850	3190		745	510			
Benicia	2700	78	49	98	34	70	33	
Martinez	74	74	54	44	44	b 39	29	
West Suisun	260						38	
Innisfail Ferry	701	554	230	c 132	74	92		
Port Chicago	573	59		201	167	b 105	b 90	
Spoonbill Creek	22	14	11	93	31	35	33	
Pittsburg	37	39	18	f 16	12	f 19		
Sacramento River Delta								
Collinsville	13	15	18	c 8	9	5	10	
Ematon	15	b 11	7	b 15	b 8	b 4	b, f 5	
Threemile Slough Bridge	9	8	5	6	6	4	8	
Rio Vista Bridge	9	9	8	9	8	5	8	
Isleton Bridge	6	7	13	4	5	4	11	
San Joaquin River Delta								
Antioch	45	47	43	40	38	17	33	
Antioch Bridge	41	32	35	33	27	20	18	
Jersey Island	52	b, f 48	44					
Threemile Slough	45	31		25			17	
Oulton Point	b 37	b 35	b, c 25	21	c 21	22	35	
San Andreas Landing	27	25	20	9	19	10	10	
Opposite Central Landing	9	b 9	8	8	8	7	8	
Dutch Slough	103	b 107	106	98	96	78	102	
East Contra Costa I. D.	f 165	b 151	143	140	b, f 131	97	110	
Clifton Court Ferry		b 80	64		b 74			
Mossdale Bridge	b 69	b 39		b 59	b 88			
Vernalis (h)	g 71	c 41	c, f 61			e 34	c, g 57	
March 1958								
Station	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Orient				5780				
Point Pinole				1570	1810	2250	1940	
Grand View	385	636	956	f 4120	1760	3680	b 686	784
Crockett		333	b 843	784	539	1230	245	191
Benicia	48	44	162	784	539	1230	245	191
Martinez	29	34	59	931	637	b 69	54	113
West Suisun	63		49	64	59	44	132	88
Innisfail Ferry	115	156	211	230	b 245	a, b 245	b 162	b 157
Port Chicago	34	34	34	39	44	44	49	24
Spoonbill Creek	20							
Pittsburg		31	29	44	34		29	15
Sacramento River Delta								
Collinsville	8	11	16	15	25	b 22	15	16
Ematon	6	7	10	16	b, c 13	14	6	12
Threemile Slough Bridge	6	6	10	7	10	9	4	14
Rio Vista Bridge	7	9	9	11	17	16	12	8
Isleton Bridge	6	6	7	6	7	8	5	5
San Joaquin River Delta								
Antioch	31	41	36	30	a 39	48	34	f 30
Antioch Bridge	25	27	33	34	a 31	37	26	24
Jersey Island								
Threemile Slough	14	24	17	c 19	21	b 27	5	24
Oulton Point	44	b 29	24	f 24	b 36	35	41	37
San Andreas Landing	23	19	10	17	46	b, c 17	13	19
Opposite Central Landing	8	b 9	8	7	6	b, c 10	4	8
Dutch Slough	87	b 92	80	73	74	f 70	58	46
East Contra Costa I. D.	131	b 101	63	87	b, f 88	f 55	47	45
Clifton Court Ferry	b 52	b 55	112		30		20	
Mossdale Bridge	b 36	44	44	60	b 25	20	17	
Vernalis (h)			c 45	c 52	20		e 17	30

* Samples taken at four-day intervals approximately one and one-half hours after high-high tide.
 a Presumed. e Taken on preceding day.
 b Taken after low-high tide. f Taken on following day.
 c Taken over one hour off scheduled time. g Taken two days later.
 d Taken two days earlier. h Station located above tidal action.

TABLE 401

SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS*

In parts of chloride per million parts of water

Station	April 1958							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Orient								
Point Pinole	b 5430			b 1910	b 2650			b 7190
Grand View	1420	686	343	e 441	686	2160	3770	e 4450
Crockett	637	b,f 29	b,f 93	34	b,f 343	b 735		
Benicia	34	39	39	34	108	603	441	c 2620
Martinez	b 24	b 27	35	b 27	b 33	b 34	198	b 308
West Suisun	29	20		37	47	44	59	86
Innisfail Ferry	b 118		125	125	118	167	b 172	b 159
Port Chicago	29	12	20	18	a 20	24	20	20
Spoonbill Creek	15	14						
Pittsburg	b 20	27	25		b 25	b 24	14	b 15
Sacramento River Delta								
Collinsville		b 10	10	b 9	b 13	11	11	b 14
Emmaton	b 5	4	6	b 12	29	b 13	10	b 10
Threemile Slough Bridge		2	5	18	8	11	9	5
Rio Vista Bridge	8	6	9	10	6	8	9	3
Isleton Bridge		2	5	6	7	7	7	4
San Joaquin River Delta								
Antioch	b 25	24	24	b 28	29	26	25	23
Antioch Bridge	24	13	b,f 18	20	24	24		25
Jersey Island								
Threemile Slough	b 13		20	b 18		19		c 10
Oulton Point	22	15	27	b 37	29	20	28	20
San Andreas Landing	b 22	b 8	8	b 9	b 22	b 24	24	b 18
Opposite Central Landing	b 4	4	6	b 8	b 7	14	14	b 4
Dutch Slough	b 41	41	38		36	43	32	c 34
East Contra Costa I. D.	f 56	48	35	b 38	b 42	f 34	34	49
Clifton Court Ferry	30		29	29	31	29		21
Mossdale Bridge	20	61	20	22	24	22	24	20
Vernalis (h)	g 19		f 22	f 24				
May 1958								
Station	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Orient								
Point Pinole			4610	b 4960			b 5040	
Grand View	4720	4830	1570	e 3590	4890	5760	5740	e 4580
Crockett			1640	3320	2440	490	1640	2010
Benicia	2260	1880	b 322	b 122	b 198	b 110	b 103	b 159
Martinez	b 39	b 42	59	1460	588	98	34	
West Suisun		413				66	49	b 42
Innisfail Ferry	b 144	162	b 173	95	96	b 66	15	19
Port Chicago	e 28	23	20			16		
Spoonbill Creek								
Pittsburg		20			b 14	14		b 12
Sacramento River Delta								
Collinsville	b 7	11		b 12		9		b 7
Emmaton	10	8	b 12	b 9	8	9	a,b 6	b 7
Threemile Slough Bridge	8	7	f 12	9	6	7	f 9	d 7
Rio Vista Bridge	6	5	f 5	5	6	5	f 6	4
Isleton Bridge	4	4	f 4	5	5	a 3	f 5	4
San Joaquin River Delta								
Antioch	a,b 22	b 20	b 20	b 17	b 17	b 16	b 14	b 11
Antioch Bridge	22	20	f 18			14	f 3	12
Jersey Island						15		
Threemile Slough	b 16	18		b 16		12	b 11	b 8
Oulton Point	17	19	b 18	b 15	b,c 14	b 14	b 14	a,b 11
San Andreas Landing	b 17	b 19	b 15	b 13	b 15	14	b 6	b 9
Opposite Central Landing	b 6	6	b 6	b 5	b 5	5		b 6
Dutch Slough	a,c 31	31	25	25	a 26	b 20	e 15	c 16
East Contra Costa I. D.	b 52	44	b 40	30	20	27	b 25	b 25
Clifton Court Ferry	20	20		15		11		
Mossdale Bridge	20	15	b 15	15	13	10	b 9	a 13
Vernalis (h)	c 18	c 16	c,e 16	e 16	a,d 14	f 11		

* Samples taken at four-day intervals approximately one and one-half hours after high-high tide.

a Presumed.

b Taken after low-high tide.

c Taken over one hour off scheduled time.

d Taken two days earlier.

e Taken on preceding day.

f Taken on following day.

g Taken two days later.

h Station located above tidal action.

TABLE 401

SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS*

In parts of chloride per million parts of water

Station	June 1958							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo, and Suisun Bays							
Point Orient			b 4220		b 6780			b 7220
Point Pinole	b 4560		5000	5480	5750	8650		a 6440
Grand View	5290	4690	4230		b 3140		b 5070	5800
Crockett			1700	3360	3190	2020		5020
Benicia	1630	a 201	b 702	b 544	a, b 515			b 964
Martinez	b 93	b 45		597			b 305	4410
West Suisun	39	37		60	61			
Innisfall Ferry		67	a, c 58		53	28		
Port Chicago		18	23					
Spoonbill Creek			13				b 14	
Pittsburg	b 11	14			b 11			b 17
	Sacramento River Delta							
Collinsville	b 7	9		b 10	10	b 8		b 10
Emmaton	7	b 8	b 10 ^r	b 8	b 8	7		b 10
Threemile Slough Bridge	7	10	f 12	7	7	5	7	14
Rio Vista Bridge	5	10	f 8	7	11	7		7
Isleton Bridge	3	6	f 5	4	14	5		7
	San Joaquin River Delta							
Antioch	b 13	13	b 16	b 13	b 16			b 19
Antioch Bridge	11	12	a, f 14	a 12	14			18
Jersey Island			b 10	b 12	b 11			b 14
Threemile Slough	b 9	10	b 26	b 12	12	b 12		14
Culton Point	18	16	b 8	b 13	b 14	b 11		b 14
San Andreas Landing	b 11	12	b 6	b 5				b 7
Opposite Central Landing	5	5		20	b, c 16			b 21
Dutch Slough	b 16	a 17	a, b 18	c 20	36	b 29		21
East Contra Costa I. D.	25	22	b 20	c 20	23			21
Clifton Court Ferry		c 17		c 11	25			19
Mossdale Bridge	13	11	b 17	b 20	25	b 10		
Vernalis (h)	f 12	c 12	c 16		g 22			
	July 1958							
Station	2	6	10	14	18	22	26	30
	San Francisco, San Pablo, and Suisun Bays							
Point Orient			b 9852	b, c 10900				b 12800
Point Pinole	b 8700		7192	6990	8420	8750	8920	9530
Grand View	7320	7870	6490	8840	9040	11000	a 11500	a 9990
Crockett	a 5950	e 6222	6497	6800	7380	8200	9700	7920
Benicia	5510	4330	b 2217	b 3490	b 2820	b 3370	b 3480	b 3720
Martinez	b 1420	709	4877	4880		6320	f 7520	6060
West Suisun		2450				703		b 849
Innisfall Ferry	b 72	65	79	a 334	b 486	4650	a, f 5370	5000
Port Chicago		b 1230	f 2685	5620	207	363	f 363	448
Spoonbill Creek	17	33	52	97		b 240	b 191	
Pittsburg		b 19	b, c 29		b 154			
	Sacramento River Delta							
Collinsville	b 11	b 14		b, c 16	196	b 50	b 61	b 220
Emmaton	b 9	b 10	b 10	b 11	b 11	b 12	b 12	20
Threemile Slough Bridge	9	10	f 10	12	11	12	f 14	15
Rio Vista Bridge	8	8	f 7	12	11	9	f 10	10
Isleton Bridge	6	7	f 10	9	10	10	f 10	9
	San Joaquin River Delta							
Antioch	b 20	b 20	b 20	b 28	b 51	b 69	b 62	b 79
Antioch Bridge	c 17	c 17	f 16	b 20	41	c 46	c, f 50	
Jersey Island			b 14	b 23	b 14	b 14		b 14
Threemile Slough	b 14		b 14	b 13	b 14	b 14		15
Culton Point	15	b 15	b 14	b 14	b 14	b 14	b 15	15
San Andreas Landing		b 23	b 12	b 14	b 15	b 14	b 14	b 19
Opposite Central Landing		b 9	b 9	b 9	13	b 10	b 8	b 11
Dutch Slough	a 20	b 19	a, b, c 20	a, b 23	a 22	a, b, c 19	a, b 20	10
East Contra Costa I. D.	23	29	b 40	b 48	f 36	b, c, f 44	f 31	29
Clifton Court Ferry	17	b 47						27
Mossdale Bridge	20	b 49	b 51	63	83	b 98	b, c 219	106
Vernalis (h)	c, e 22	g 32			c 87	107	116	c, e 41

- * Samples taken at four-day intervals approximately one and one-half hours after high-high tide.
- a Presumed.
 b Taken after low-high tide.
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 h Station located above tidal action.

TABLE 401
SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS*
In parts of chloride per million parts of water

Station	August 1958							
	2	6	10	14	18	22	26	30
	San Francisco, San Pablo, and Suisun Bays							
Point Orient				b 13400			b 12800	
Point Pinole				10400			e 11200	A,c 10900
Grand View	2620	9980			10500	a 10800	11900	
Crockett	a 10700	8320	9570				9710	
Benicia	8390	8130	9050	9100	8590	8800	8800	7630
Martinez	b 4250	b 3910	b 4070	b 4110	4660	b 4000	a,b 3820	b 4450
West Suisun		5370	6230	7520	6930	6480	6280	4730
Innisfail Ferry	1150	b,c 965	f 1230	b 1380	1550	1780	b 1720	b 1750
Port Chicago		c 2620	f 4980	5830	5550	5430	4900	
Spoonbill Creek	524							
Pittsburg	a,b,c 242		b 297	b 310	b 740	b 578	b 350	b 397
	Sacramento River Delta							
Collinsville	376	b 100	b 137		b 550	b 282	b 214	
Emmaton	b 13	29	b 12	b 14	b,f 15	16	b 14	15
Threemile Slough Bridge	17	11	f 13	14	14	14	16	12
Rio Vista Bridge	12	11	f 10	9	10	10	11	10
Isleton Bridge	9	8	f 7	10	10	f 10	10	11
	San Joaquin River Delta							
Antioch	143	137	b 82	b 148	90	b 96	b 130	184
Antioch Bridge						c 44	b,c 85	c 112
Jersey Island								
Threemile Slough		b 14	b 16	b 14	14		b 15	b 13
Culton Point		b 13	b 13	15	b 16	b 13	b 15	b 15
San Andreas Landing	b 13	12	b 12	b 12	12		b 12	b 12
Opposite Central Landing	11	b 8	b 9	b 11	b 10		b 10	11
Dutch Slough	b,c 20	a,b 20	a,b 22	b 23	b 23		b 27	b 24
East Contra Costa I. D.	27	b 38	f 27	24	30	f 27	b 39	50
Clifton Court Ferry				25	b 24		26	
Mossdale Bridge	27	b 120	b 123	127	b 120	b 122	120	122
Vernalis (h)		b,c 131	e 120	d 121	d 129	e 124		
	September 1958							
	San Francisco, San Pablo, and Suisun Bays							
Point Orient			b 12700			b 11700	11800	
Point Pinole								
Grand View	10800							
Crockett	9730	8880	e 10000	9160	8280	e 9120	8860	
Benicia	7740	7780	a,e 8950	6720	7310		4580	6830
Martinez	b 3980	b 3440	b 4270	3100		b 3140	4600	
West Suisun	5150	5320	6000	5480	4940	4610	b 3750	
Innisfail Ferry	b 1680	1700	1690	1580	1250	a,b 1140	1230	
Port Chicago		4740	a 5590		3530		2940	
Spoonbill Creek	516	276						
Pittsburg	b 246		b 187	182	b 149	f 103	278	
	Sacramento River Delta							
Collinsville	b 227		b 133	45			36	b 134
Emmaton	12	b 11	b 11	b 12	b 10	b 10	10	b 10
Threemile Slough Bridge	12	12	12	11	11	f 11	10	10
Rio Vista Bridge	10	f 10	10	10	9	f 7	7	6
Isleton Bridge	8	f 10	9	12	8	f 7	8	6
	San Joaquin River Delta							
Antioch	140	94	b 54	66	97	b 72	58	82
Antioch Bridge	83		b,f 40		b,c 46	b 38		b 50
Jersey Island								
Threemile Slough		b 13	b 10	13	b 12	b 13	12	13
Culton Point	b 14	b 13	b 13	13	b,f 13	b 13	14	18
San Andreas Landing	13	b 14	b 12	13	13	b 13	13	13
Opposite Central Landing	b 10				b 8	b 8	9	8
Dutch Slough	b 21	b 21	a,b 19	18	b 18	a,b 20	a,b,c 22	b 22
East Contra Costa I. D.	b 39	b 45	43	57	b,f 47	b 59	b 74	67
Clifton Court Ferry	24		36	b 62	b 45	a,b 41	b 42	b 40
Mossdale Bridge	b 116	b 116	96	b 75	b 84	b 78	b 69	b 71
Vernalis (h)		e 118	e 90	g 75	f 76	f 78	68	f 75

* Samples taken at four-day intervals approximately one and one-half hours after high-high tide.
a Presumed. e Taken on preceding day.
b Taken after low-high tide. f Taken on following day.
c Taken over one hour off scheduled time. g Taken two days later.
d Taken two days earlier. h Station located above tidal action.

TABLE 227
SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

In parts of chloride per million parts of water

Samples taken at four-day intervals approximately one and one-half hours after high high tide.

Station	October 1958							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Pinole	12700	a 12400	12400	d 12800		11500		12400
Crockett	8700	8630	10100	11300	8830	9200	9720	8830
Bentica	a 6500	7400	6900	7500	6750		7080	5870
Martinez	5050	a 5080	4680	*a 4810	5970	4730	4640	
West Suisun	4780	5080	5820		2590		1450	a 5030
Innisfail Ferry	a 1220	a 1290	1360	1480		1440	3860	a 1440
Port Chicago		3320	a,d 4550	4290	4270			
Spoonbill Creek	279	491						
Pittsburg	a 110	a 104	169	404				
Sacramento River Delta								
Collinsville	a 40	a 65	42	361	a 95	63	30	
Emmaton		8	9	10	a 10	8	a 35	a 9
Threemile Slough Bridge	11	10	14	11	11	10	10	11
Rio Vista Bridge	6	6	5	5	8	4	8	6
Isleton Bridge	7	6	7	6	11	4	9	5
San Joaquin River Delta								
Antioch	53	a 43	78	116		62	67	58
Antioch Bridge	a 41	a 16	17	a 33	a 44		a 36	a 26
Jersey Island			14	a 16	a 15	18		16
Threemile Slough	a 12	a 13	12	12	a 14	14	b 15	15
Culton Point	12	a 13	14	a 13	a 18	a 16	d 15	24
San Andreas Landing	a 15	a 8	7	a 10	a 9	10	e 9	a 6
Opposite Central Landing	a 7	a 20	a 22	*a 22	*a 24	*a 3	e 26	*a 30
Dutch Slough	a 21	a 67	72	a 91	a 89	53	a 65	a 82
E.C.C.I.D.	a 19	a 49	a 65	a 79	a 85	88	a 54	a 56
Clifton Court Ferry	a 12	a 77	a 80	a 84	a 85	e 93	a 47	a 54
Mossdale Bridge	a 13		74				f 45	b 53
Vernalis (g)	b 20							
November 1958								
San Francisco, San Pablo and Suisun Bays								
Point Pinole		d 12400	a 12300	11900	10800		12600	10900
Crockett	8400	8400	10700	10100	7200	10100	9920	8660
Bentica	6610	6610	6960	9230	5650	6050	7180	6050
Martinez	4000	4000	4830	3660	5160	6210	6340	5630
West Suisun		1330	1120	6260	1360	1180	a 1330	a 1540
Innisfail Ferry	a,d 1450		4930	1220	2440		5340	
Port Chicago		144		223		272	574	337
Spoonbill Creek	174		569	a 197	78			
Pittsburg	a 55	a 88						
Sacramento River Delta								
Collinsville	a 33	31	84	a 30	53	70	241	
Emmaton	a 9	10	14	14	26	12	a 17	14
Threemile Slough Bridge	12	13	12	14	6	13	14	14
Rio Vista Bridge	6	7	6	6	5	6	6	8
Isleton Bridge	7	5	6	5	5	5	11	7
San Joaquin River Delta								
Antioch	36	33	48	a 72	44	46	78	66
Antioch Bridge	b 23	24	a 21	a 35	34	a 35	a 45	42
Threemile Slough		18					22	
Culton Point	a 9	20	21	a 25	23	23	21	24
San Andreas Landing	a 23	a 26	22	a 24	23	22	21	6
Opposite Central Landing	a 6	10	8	a 7	5	5	a 8	46
Dutch Slough	a 34	39		a 43	42	42	a 48	
E.C.C.I.D.	a 92	b 89	87	a 80	81	81	79	
Clifton Court Ferry	a 52	56	a 56	a 56		a 50	a 52	a 44
Mossdale Bridge	a 52		a 53	a 53	54		a 49	
Vernalis (g)	c 56	b 52			53		a 48	

* Presumed.
a Taken after Low High Tide.
b Taken on following day.
c Taken two days later.
d Taken over one hour off scheduled time.
e Taken on preceding day.
f Taken two days earlier.
g Station located above tidal action.

TABLE 227

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

In parts of chloride per million parts of water

Samples taken at four-day intervals approximately one and one-half hours after high high tide.

Station	December 1958							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Pinole			12400		10900	12300		11400
Crockett	22-0	9490	10100	9210	8780	10200	10800	2650
Poncha	6520	8160	6940	6670	7410	5400	2650	5770
Martinez	3670		5290	5230	4910	6230	7150	5590
West Suisun		4490		3480		a 3510	5680	3210
Innisfail Ferry		c, a 1560	1560	a 1660	1650	1670	a 1710	a 1650
Port Chicago	3360	b 5470	4260				1570	3220
Spoonbill Creek	313		430	503	306	669		509
Pittsburg			162	a 294	508	730		
Sacramento River Delta								
Collinsville	a 34	153	131	a 48	63	242	372	a 85
Emmaton		e, a 13	a 16	a 15	14	15	16	13
Threemile Slough Bridge	15	15	15	14	12	13	13	11
Rio Vista Bridge	8	d 7	7	7	6	7	8	7
Isleton Bridge	6	6	6	6	6	7	7	10
San Joaquin River Delta								
Antioch		63	98	75	83	158	171	90
Antioch Bridge	a 36	d 33	54	a 42	a, b 27	a 48	b 31	68
Jersey Island			32					
Threemile Slough	24		23	d 23	24	25	20	a 22
Oulton Point	22	20	23	23	22	25	23	a 24
San Andreas Landing		20	18	17	16	20	23	a 25
Opposite Central Landing		6	7	a 6	8	9	a 9	a 10
Dutch Slough	46	a 45	a 59	45	47	76	a 70	a 47
E.C.C.I.D.		70	66	61	71	a 46	a 48	a 80
Clifton Court Ferry		47	a 61	a 53	94	86	a 86	a 96
Mossdale Bridge	49	e 49	a 54	a 54	f 54	f 59	a 86	a 96
Vernalis (g)			e 50	f 54	f 59	h 85	80	
January 1959								
San Francisco, San Pablo, and Suisun Bays								
Point Pinole	d 12100		12100			11600		
Crockett	9220		9540	5100	6170	7840		
Poncha		11400		2430	4480	6000	4780	3480
Martinez	4450	7570	2670	2720	2410	3470	2330	
West Suisun		6310	4100	1040	1440		1840	
Innisfail Ferry	a 1790	1690	a 1680	1650	1560	1150	857	1100
Port Chicago			4030	494	1350	2900	1660	
Spoonbill Creek	434	1280	784	164	48	57	66	44
Pittsburg			67	44	35	38	34	
Sacramento River Delta								
Collinsville		596	204	18	14		13	17
Emmaton			15	15	13	13	21	14
Threemile Slough Bridge	12	13	14	12	7	10	11	15
Rio Vista Bridge	8	8	10	8	7	9	13	10
Isleton Bridge	8	10	10	5	8	6	7	
San Joaquin River Delta								
Antioch	d 80	237	148	46	36	36	37	43
Antioch Bridge			90	36	a, b, d 34	a 42	37	a 40
Jersey Island	37	53			35			43
Threemile Slough	24	32	28	17		33	36	28
Oulton Point	21	21	26	27	29	28	35	36
San Andreas Landing	39	26	22	28	22	39	a 9	24
Opposite Central Landing	12	17	a 11	8	7	11	a 9	12
Dutch Slough	48	40	a 53	63	72	a 72	a 74	75
E.C.C.I.D.	88	94	a 113	121	b, d 139	a 146	a 148	156
Clifton Court Ferry	56					a 99	a 104	
Mossdale Bridge	88	a 122	a 104	100	85	a 93	a 94	106
Vernalis (g)		96		e 103	f 78	b 94	b 106	

* Presumed.
 a Taken after Low High Tide.
 b Taken on following day.
 c Taken two days later.

d Taken over one hour off scheduled time.
 e Taken on preceding day.
 f Taken two days earlier.
 g Station located above tidal action.
 h Taken three days earlier.

TABLE 227

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

In parts of chloride per million parts of water

Samples taken at four-day intervals approximately one and one-half hours after high high tide.

Station	February 1959							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Pinole		10500	a 10900		8950		a 4050	
Crockett	5930	7770	7030	5620	5320	2570	1330	
Bentley	5260	4950	3110	4080	3560	800	247	
Martinez	3540	3050	a 7450	3450	3810	560	a 89	
West Suisun		2770	720	1020		72	a 289	
Innisfail Ferry	a, e 1200	1010	769	769	a 343	a 800	77	
Port Chicago		1790	745	a, d 490	1890	1890	15	
Spoonbill Creek	45	30	25	25	168	27		
Pittsburg	43	33	38	35	46	36		
Sacramento River Delta								
Collinsville	19	19	18	17	18	15	8	
Emmaton	15	15	17	a, b 17	20	16	8	
Threemile Slough Bridge	12	14	9	16		9	7	
Rio Vista Bridge	16	21	17	12		12	6	
Isleton Bridge	9	8	11	10		6		
San Joaquin River Delta								
Antioch	37	37	47	42	48	47	46	
Antioch Bridge	45	34	43	a 37	a 49	b 34	a 10	
Jersey Island	47			40	d 36		19	
Threemile Slough	21	37	d 28	37	42	32	26	
Oulton Point	40	29	a 34	39	15	25	25	
San Andreas Landing	38	d 37	35	10	10	9		
Opposite Central Landing	34	a 10	10	82	80	101	110	
Dutch Slough	68	a 74	74	170	175	a 174	143	
E.C.C.I.D.	156	a 159	b 159			a, d 128	55	
Clifton Court Ferry	114	a 130		91		a 48	59	
Mossdale Bridge	128	a 119	130	e 87	e 64	f 49	b 59	
Vernalis (g)	c 115	118						
March 1959								
San Francisco, San Pablo, and Suisun Bays								
Point Pinole	4870	8920	a 7600	a, d 7680	8480	e 11200	a 11200	
Crockett	3500	5400	5240	5050	5570	7220	6010	6480
Bentley	2020	3520	2900	3110	4220	5280	a 2050	4200
Martinez	1100	939	a 638	1270	4140	4510	2530	3200
West Suisun	a 68		356	728	376	a 396	a 496	a 514
Innisfail Ferry	a 300	287	a 338	333	a, b 2420	a, c 2560	2390	79
Port Chicago			96	26	28	68	102	72
Spoonbill Creek	20	20	21	36		204	156	
Pittsburg	33		a 35					
Sacramento River Delta								
Collinsville	10	16	18	14	22	54	a 17	27
Emmaton	14	14	14	13	13	17	13	15
Threemile Slough Bridge	9	16	11	11	10	13	10	12
Rio Vista Bridge	9	15	14	11	11	14	9	12
Isleton Bridge	10	10	7	10	12			7
San Joaquin River Delta								
Antioch	50	40	39	35	27	38	46	43
Antioch Bridge			a 28	29	26		a, d 20	18
Jersey Island		32	a 30	30	29	26	a 18	18
Threemile Slough	29	30	29	28	25	21	a 15	19
Oulton Point	26	30	8	11	12	a 10	a 9	8
San Andreas Landing	10	10	8	74	60	a 57	51	44
Opposite Central Landing	106	90	82	139	181	a 132	125	106
Dutch Slough	144	a 148	145	91	91	a 90	83	76
E.C.C.I.D.	70	a 83	88	121	189	a 201	173	153
Clifton Court Ferry	69	79	99			c 180	b 155	
Mossdale Bridge	b 83	89						
Vernalis (g)								

- * Presumed.
- ** Effective February, 1959, samples taken approximately 1 mile downstream.
- a Taken after Low High Tide.
- b Taken on following day.

- c Taken two days later.
- d Taken over one hour off scheduled time.
- e Taken on preceding day.
- f Taken two days earlier.
- g Station located above tidal action.

TABLE 227

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

In parts of chloride per million parts of water

Samples taken at four-day intervals approximately one and one-half hours after high high tide.

Station	April 1959							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Pinole		a 11800	a 11600		a 13600	a 12800		
Crockett	7170	9140	8550	8340	e 9750	11700	12300	11500
Benicia	1600	5980	6340	4440	e 6510	9700	10200	9340
Martinez	1570	a 5330	a 2240	5710	a 5100	a 5190	a 7450	a 6270
West Suisun		845	3510	4030	4670			5970
Innisfail Ferry	a 512	a 480	d 476	a 496		774	a 1640	
Port Chicago	1930	b, a 2860	2640	3290	5030	6410		
Spoonbill Creek	52	100	113	128	368	973	1550	1470
Pittsburg	51	a 51	a 46	120	a 156	a 1590		
Sacramento River Delta								
Collinsville	30	a 17	20	27	a 56	a 392	1220	a 683
Ematon	13	14	15	20	a 17		180	a 99
Threemile Slough Bridge	11	13	13	9	8	14	43	a 18
Rio Vista Bridge	10	7	8	7	14	9	9	14
Isleton Bridge	8	6	5	9	9	12	9	
San Joaquin River Delta								
Antioch	35	a 32	a 35	38	a 56	a 192	548	a 276
Antioch Bridge						a 39	391	a 101
Jersey Island								
Threemile Slough		a 14	11	16		a 14	23	a 19
Quilton Point		a 14	a 10	17	a 13	a, c 17	24	a 21
San Andreas Landing		a 11	9	10	a 12	a 11	12	a 13
Opposite Central Landing		a 10	6	6	a 16	a 9		
Dutch Slough		a 33	28	29	a 24	a 23	a, d 23	a 28
E.C.C.I.D.		80	63	52	a, c 45	a 42	30	a 43
Clifton Court Ferry		54	47	43		32	29	a 34
Mossdale Bridge		190	200	188	a 196	201	199	a 119
Vernalis (s)		f 177	198	187				
May 1959								
San Francisco, San Pablo, and Suisun Bays								
Point Pinole		a 12800		13600		a 13800		
Crockett	e 11200	10400	e 10300	e 9850	a 9850	a 11700		
Benicia	e 7170	5980	9030	6240	e 8390	10700	10600	10000
Martinez		a 1500	a, b 4110	6780		a 5070	a 5460	a 5850
West Suisun	e 6730	5000		5120	e 7320	7360	7510	
Innisfail Ferry		1700	2050	1900	e, d 1680	a, b 1980	a 2390	a 2150
Port Chicago	5510		5850			8290	7070	7190
Spoonbill Creek	1330	805	629	1260	780	1080	1860	1450
Pittsburg		a 256	780		a 305	a 927	1830	b 1260
Sacramento River Delta								
Collinsville	405	a 236	a 237	410	a 288	a 522	985	a 784
Ematon	a 13	a 25	a 50	70	a 31	148	282	a 79
Threemile Slough Bridge	13	22	15	15	17	18	30	
Rio Vista Bridge	12	12	16	13	e 12	14	15	b 14
Isleton Bridge	12	13	14		13	13	19	18
San Joaquin River Delta								
Antioch	a 213	a 129	a 197	254	a 141	a 220	649	a 282
Antioch Bridge	a 43	51	212	98	a 68	a 102	a 190	b 141
Jersey Island	a 39			a 50			87	
Threemile Slough		a 15		18	a 18	a 20	31	
Quilton Point	a 19	a 26	19	23	a 16	a 24	34	a 24
San Andreas Landing	a 14	a 15	16	16	a 14	a 16	20	a 17
Opposite Central Landing	a 12	a 12	14	14	a 13	a 15	14	a 14
Dutch Slough	a, d 30	d 32	30	31	a 29	30	35	a 35
E.C.C.I.D.	a 45	34	30	52	a 40	26	33	a 30
Clifton Court Ferry		32	32	26	27	26	29	
Mossdale Bridge	121	154	190	179	198	170	163	a 178
Vernalis (s)	123	c 193		b 193	b 200	b 193		

* Presumed.
 a Taken after Low High Tide.
 b Taken on following day.
 c Taken two days later.

d Taken over one hour off scheduled time.
 e Taken on preceding day.
 f Taken two days earlier.
 g Station located above tidal action.

TABLE 227

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

In parts of chloride per million parts of water

Samples taken at four-day intervals approximately one and one-half hours after high tide.

Station	June 1959							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Pinole					a 14403	a, c 15353	a 15200	a 15500
Crockett		e 12500	e 11900	13700	10700	e 14400	14600	14600
Berlicia	6220	11200	10400	10700	a 9150	13000	10300	12600
Martinez	a 5950	a 6350	a 6030	a 8100	a 7870	a 5540	9200	a 9210
West Suisun	8540	a 7040	8000	9500	b 11200	11700		
Innisfall Ferry	b 2510	2700	d 2930	3600	4430			
Port Chicago			7350	6720		10700		
Spoonbill Creek	1910	a 1950	2200	2350	a 3090	4620	a 5220	b 4560
Pittsburg		a 1620	2300	a 591	a 2440		a 5110	
Sacramento River Delta								
Collinsville	a 794	a 1270		a 1700		3770	a 3640	a 3100
Ematon	a 97	a 242	* b 289	a 412	a 2400	1530	a 1780	a 977
Threemile Slough Bridge	31	43		b 71	290	623	a 519	a 299
Rio Vista Bridge	15	12	15	b 19	34	116	b 42	a 16
Isleton Bridge	15	17	15	b 15	14	20	b 18	a 11
San Joaquin River Delta								
Antioch	a 315	a 557	1010	a 529	a 197	2150	a 2440	a 1820
Antioch Bridge	a 122	a 192	a 276	b 260		a 1180	a 1110	a 890
Jersey Island	a 56			240		1180	a 719	1220
Threemile Slough	a, d 36		60	a 62	a 131	a 225	a 354	
Quilton Point	a 28	50	58	a 55		330	a 166	a 232
San Andreas Landing	a 16	a 18	25	a 19	a 30	a 49	a 52	a 74
Opposite Central Landing	a 13	a 15	19	a 17	a 16	46	a 24	a 16
Dutch Slough			61	69	a 102	163	a 450	a 314
E.C.C.I.D.	27	a 28	28	b 29		43	a 55	a 62
Clifton Court Ferry	28		30		32	33	a 42	a 55
Mossdale Bridge		186	193	a 206	d 193	230	a 229	a 242
Vernalis (s)	b 167	194	c 195	c 190	b 234		250	
July 1959								
San Francisco, San Pablo, and Suisun Bays								
Point Pinole				a 16700		a 16300		a 17200
Crockett		a, c 10700						
Berlicia	12900	13500	12300	12200	14000	19200	13200	14200
Martinez	a 9240	a 8630	a 9410	a 10200	a 10100	a 10100	a 10000	a 9330
West Suisun		c 11700		13200	12000			11600
Innisfall Ferry	5770	6280	a 6390	6480	9640		b 7440	
Port Chicago	10700	11000				15640		
Spoonbill Creek	4720	4080	4740	5580		6270	a 5800	5570
Pittsburg			4830			5010	a 4380	
Sacramento River Delta								
Collinsville	a 3470	a 3900	3630	a 3900	a 4900	5430	a 4240	a 3670
Ematon	a 1250	a 1600	1900	a 1510	a 2010	b 2600	a 1640	1030
Threemile Slough Bridge	552	501		1070	1480	1280	711	633
Rio Vista Bridge	81	31	54	219	24	209	33	14
Isleton Bridge	9	14	11	12	19	11	b 12	8
San Joaquin River Delta								
Antioch	a 2170	a 2680	2770	2640	a 2950	5632	3410	3220
Antioch Bridge	a 1700	a 1940	a 1990	a 1840	a 1860		2570	a 2240
Jersey Island								
Threemile Slough	a 405	a 445	a 339	a 498	a 657	1900	f 622	a 502
Quilton Point	a 287	10	512	a 495	a 567	114	a 438	a 286
San Andreas Landing	a 81	a 102	a 22	a 157	a 188	248	a 145	a 120
Opposite Central Landing	a 16	a 16	18	a 20	a 23	35		a 13
Dutch Slough	a 414	a 509	517	a 600	d 867	a 1044	a 87	a 908
E.C.C.I.D.	a, b 99	114	138	174	208	253	323	351
Clifton Court Ferry			113					
Mossdale Bridge	207	220	224	a 238	244	239	a 235	192
Vernalis (s)			236			e 264		297

* Presumed.

a Taken after Low High Tide

b Taken on following day.

c Taken two days later.

d Taken over one hour off scheduled time.

e Taken on preceding day.

f Taken two days earlier.

g Station located above tidal action.

TABLE 227

SALINITY OBSERVATIONS, SACRAMENTO-SAN JOAQUIN DELTA AND UPPER BAYS

In parts of chloride per million parts of water

Samples taken at four-day intervals approximately one and one-half hours after high high tide.

Station	August 1959							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Pinole		a 15900		a 15300				
Crockett			13500	14000		11700	13200	
Benicia	13000	13200	12200	12000	12800	10200	10200	e 12100
Martinez	a 8850	a 9920	a 7870	a 9130	a 9120	7860	a 8050	a 8140
West Suisun	10900		11200	b 12900			9700	a 7420
Innisfail Ferry			6810	a 6910	6580	d 6300	d 5820	5950
Port Chicago	e 10300	9710	9130	b 10500	10300			
Spoonbill Creek	5350	d 4400	4380	b 3910	3830	3410	4000	3520
Pittsburg			a 2790	a 3330	a 3070			
Sacramento River Delta								
Collinsville	a 3580	a 2950		a, d 2170	a 2610		a 2160	a 1710
Emmaton	a, b 620	1140	1180	a 498	a 1140	663	545	a 285
Threemile Slough Bridge	877	279	263	b 337	250	176	186	121
Rio Vista Bridge	14	16	13	b 23	13	10	b 13	14
Isleton Bridge	9	8	10	b 12	10	11	b 16	13
San Joaquin River Delta								
Antioch	a 2310	2130	2160	a 1580	1930	1620	a 1020	a 1000
Antioch Bridge	a 3560	a 994	a 1100	d 754	a 661	a 523	d 800	a 474
Jersey Island	a 343	b 1060		a 467				
Threemile Slough	a, d 528	a 267	a 298		a 202	130	a, d 151	
Culton Point	a 23	417	a 269	a 209	a 221	a 165	a 126	a 112
San Andreas Landing	a 109	116	a 87	a 70	a 56	a 46	a, d 40	a 29
Opposite Central Landing	a 34	13	a 13	a 14	a 15	a 14	a 14	a 12
Dutch Slough	a 616	788	a 596	a 464	a 468	a 363	e 313	a 269
E.C.C.I.D.	342	356	327		231	a 221	a 203	195
Clifton Court Ferry		211	a, d 192	a 223	146			200
Mossdale Bridge	174	214	a 261	a 223	257	a 218	a 185	
Vernalis (s)		261	b 229	289	234	e 235	e 196	
September 1959								
San Francisco, San Pablo, and Suisun Bays								
Point Pinole			a 15500			a, d 13700		
Crockett	13300	b 13200	13200	12900	12800		10500	11600
Benicia		10400	11700	11100	9370	9230	9110	8140
Martinez		8760	a 7570	a 7050	8580	a 5470	a 5130	
West Suisun	5330			8520	7090	6410		6540
Innisfail Ferry	a 5810	5480		d 5950	4820	a, b 5000	c, d 4090	3530
Port Chicago	9220	7750	8190	8140	7870	d 6310	a 6090	
Spoonbill Creek	3130	3150	3220	2780	2400	1650	1250	1200
Pittsburg	a 1900	2500	a 1880	a 2120	a 1580	a 911	a 494	988
Sacramento River Delta								
Collinsville	a 2200	2260		a 1570	a 1060	716	a 324	659
Emmaton	a 649	595	305	a 205	a, b 202	97	a 40	87
Threemile Slough Bridge	117	100	116	55	44	25	b 24	19
Rio Vista Bridge	14	14	17	16	15	d 17	b 17	14
Isleton Bridge	16	16	15	15	17	15	b 19	12
San Joaquin River Delta								
Antioch	1220	1080	a 893	a 821	1240	845	a 153	176
Antioch Bridge	a 793			a 357	a 549	a 505	a 106	73
Jersey Island								
Threemile Slough		69	a 106	a 52	a 59	a 30	a 28	29
Culton Point	a 124	64	a 79	a 59	70	a 35	a 32	32
San Andreas Landing	a 45	a 47	a 38	a 36	26	a 32	a 28	23
Opposite Central Landing	a 16		20	20		a 19	a 15	13
Dutch Slough	261	a 200	a 176	a 152	128	107	d 98	78
E.C.C.I.D.	180		a 148	136	126	a 107	a 103	139
Clifton Court Ferry			94	94		110		80
Mossdale Bridge	185	a 231	a 205	224	205	a 107	a 134	a 172
Vernalis (s)	c 240			b, d 219		a 107	d, e 125	d, e 165

* Presumed.
 a Taken after Low High Tide.
 b Taken on following day.
 c Taken two days later.

d Taken over one hour off scheduled time.
 e Taken on preceding day.
 f Taken two days earlier.
 g Station located above tidal action.

TABLE 220
 SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS**
 In parts of chloride per million parts of water

Station	October 1959							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Pinole		14300		14600		13400	13600	
Crockett	11300	13090	12500	12600	13000	10700	11400	11500
Benicia	9720	10300		8330	10700	7640		9170
Martinez		7690	a 8480	7740	6490	6540	7030	7740
West Suisun	a 6260	8110				5820		
Innisfail Ferry	1620	3770	a,b 3930	3970	4070		a 4010	a 4420
Port Chicago	a 6780	7400	6940	7010	8040	b,d 3960	7550	
Spoonbill Creek	1600	1950	1900	2150	2150	1630	2080	2040
Pittsburg		a 1020		1220	1710	a 849	2360	
Sacramento River Delta								
Collinsville	623	a 740	a 908	961	2060		1700	2360
Emmaton	69	189	b 170	260	363	a 66	217	105
Threemile Slough Bridge	24	29	b 22	34	44	28	24	23
Rio Vista Bridge	12	15	b 17	12	11	9	10	14
Isleton Bridge	13	14	b 9	11	11	18	11	10
San Joaquin River Delta								
Antioch	280	524	a 362	588	740	486	580	382
Antioch Bridge		297	b 104	69	395	162	* 125	72
Threemile Slough	30	a 24	a 26	28	31	a 19	22	24
Oulton Point	28	a 26	a 27		34	a 19	b 22	23
San Andreas Landing	21	a 21	a 19	18		a 18	19	20
Opposite Central Landing	14	15	a 10	14	16	10	15	11
Dutch Slough	a 65	a 52	a 51	52	46	a 44	44	43
East Contra Costa I. D.	a 122	a 65	a 106	a 104	a 104	116	106	128
Clifton Court Ferry	a 80	a 73		a 67			80	
Mossdale Bridge	a 273	a 191	a 177	a 191	a 135	a 159	127	*a 140
Vernalis (g)	d 181	d 182	d,e 191	d,e 206		b,d 145	b,d 143	d 180
November 1959								
Station	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Pinole	13800		14100		14000			13500
Crockett	12400	* 10500	12300	12300	10800	10200	12100	13000
Benicia	9660	* 8590	8250	9580	10300	8160	10200	10700
Martinez	7270	7370	7640	6980	7220	5660	8230	8700
West Suisun	9120	6260		b,d 4580	8400	5570	6700	
Innisfail Ferry	a,b 3950	3950	4170	4010	a 4200	4290	4140	d 3730
Port Chicago	7100	6360	7210		7310	6130	6520	7970
Spoonbill Creek	2080	1880	1750	2340	2340	2060	2440	2700
Pittsburg	2410	a 1520	2450	2550	2830			2370
Sacramento River Delta								
Collinsville	1570	a 844	1330	1620	1660	1070	1160	
Emmaton	256	243	d 266	b 335	a 193	b,d 131	179	525
Threemile Slough Bridge	78	34	a 37	31	56	30	25	75
Rio Vista Bridge	14	11	9	10	11	11	18	12
Isleton Bridge	12	12	9	9	8	9	9	10
San Joaquin River Delta								
Antioch	904	a 495	645	877	1020	424		1120
Antioch Bridge	327	a 78	106	443	* 85		230	306
Threemile Slough	29		27	d 30	a 24	22	25	41
Oulton Point	28	a 25		b 34	31	24	28	32
San Andreas Landing	20	a 23	22	a 19	22	22	17	d 22
Opposite Central Landing	10	a 12	15	13	58	14	20	16
Dutch Slough	*a 38	a 38	39	40	a 38	40	40	a 41
East Contra Costa I. D.	a 60	*a 68	74	a 81	a 90	98	e 99	88
Clifton Court Ferry	a 98	a 129			a 132			140
Mossdale Bridge	a 132	a 135	128	a 127	a 151	137	a,b 144	a 166
Vernalis (g)			d 142					

** Samples taken at four-day intervals approximately one and one-half hours after high high tide.
 * Presumed.
 a Taken after low-high tide.
 b Taken on following day.
 c Taken two days later.
 d Taken over one hour off scheduled time.
 e Taken on preceding day.
 f Taken two days earlier.
 g Station located above tidal action.

TABLE 220
 SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS**
 In parts of chloride per million parts of water

Station	December 1959							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Pinole	13800		a 13200	13500	13900	13300		13000
Crockett	10300	11400	13000	b 11600	10600	11700	10900	12500
Benicia	8300	7810	10500	10800	9080	8470	9710	11400
Martinez	8100	7580	8180	d 7950	7660	8360	7640	8500
West Suisun	8300	7000	6670				7450	
Innisfail Ferry	a 4140	4160	a 4880	4660	a 4050	4360	a 4570	9010
Port Chicago	8740		a 6310		7110	6760	5430	3020
Spoonbill Creek	2800	2740	3290	3090	3190	2950	3480	3020
Pittsburg	2300	1920	3380	2610	a 2420		2580	3700
Sacramento River Delta								
Collinsville	2240	3130	2300	2260	a 1110	1610	2240	
Emmerton	483	377	556	a,b 411	558	467		a,b 351
Threemile Slough Bridge		64	175	61	193	d 78	107	278
Rio Vista Bridge	12	10	14	13	16	8	13	26
Isleton Bridge	12	a 11	10	12	10	8	10	13
San Joaquin River Delta								
Antioch	1440	820	1370	1080	967	750	1080	1250
Antioch Bridge	249	205	368	385	749		290	170
Jersey Island								
Threemile Slough	a 28	26	45	45		42	37	54
Oulton Point	d 2	35	55	b 42	a 37		50	
San Andreas Landing	d 26	19	26	14	a 25	22	25	30
Opposite Central Landing		12	11	24	a 11	12	13	12
Dutch Slough	a 39	45	48	a 57	a 35	58	68	69
East Contra Costa I. D.	a 102	101	95		a 99	100	117	a 133
Clifton Court Ferry				a 132				
Mossdale Bridge	a 154	137	b,d 137	a 120	d 103		116	a 162
Vernalis (g)						d 108	109	
January 1960								
Station	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Pinole		d 12700		13500	a 12300	12700	d 13600	
Crockett	12900	b,d 10900	12000	10700	9670	10500	*a 9810	9220
Benicia		7230	11000		6100		8710	5660
Martinez	8750	7920	7880	6580				
West Suisun	3980		7540		4500			* 3160
Innisfail Ferry	d 4810	4790	4320	a 4500	4270	a 4380	a 4430	a 4000
Port Chicago		7020	7580	6600	4200	6830	6980	3390
Spoonbill Creek	251	204	280	177	113	137	141	50
Pittsburg	d 1570		2790	1220	556	1750	1450	
Sacramento River Delta								
Collinsville	a 1260	858	1380	780	346	861		a 141
Emmerton		b,d 297	325	b 103	61	a 47	56	a 40
Threemile Slough Bridge	72	44	86	33	26	24	25	20
Rio Vista Bridge	11	20	18	10	12	12	12	13
Isleton Bridge	10	11	11	11	9	11	14	11
San Joaquin River Delta								
Antioch	771	672	1080	486	118	288	294	98
Antioch Bridge	a 92	190	128	98	a 54	110		64
Jersey Island								
Threemile Slough	a 34					38		
Oulton Point	a 29	49	a 36	34	36	35	33	39
San Andreas Landing	a 30	27	32	29	a 38	37	38	a 40
Opposite Central Landing	a 9	15	13	11	a 16	19	15	12
Dutch Slough	a 69	63	63	65	a 74	72	77	a 88
East Contra Costa I. D.	a 142	b 144	149	a 167	173	b,d 176	a 179	a 176
Clifton Court Ferry				a 121	131	128	a 144	
Mossdale Bridge	a 133	155	a 101	a 115	118	b,d 126	a 165	a 167
Vernalis (g)		d,e 153	a,c 137	b,d 119	b,d 151	d 166	a 181	a,e 165

** Samples taken at four-day intervals approximately one and one-half hours after high high tide.
 * Presumed.
 a Taken after low-high tide.
 b Taken on following day.
 c Taken two days later.
 d Taken over one hour off scheduled time.
 e Taken on preceding day.
 f Taken two days earlier.
 g Station located above tidal action.

TABLE 200
SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS**
In parts of chloride per million parts of water

Station	February 1960							
	2	6	10	14	18	22	26	
San Francisco, San Pablo, and Suisun Bays								
Point Pinole			d 1800		d 5440		10100	
Crockett			1120	2400	3860	5790	8770	
Benicia	6960	5590	1730	729	1750	4700	6090	
Martinez			1630	384	634		4540	
West Suisun			a 2020	a 1690	750	a 906	482	
Innisfail Ferry	2790	1730	216	* 43	409	2550		
Port Chicago	3780		85	5	52	78	87	
Spoonbill Creek	455	177	48	31	28	39	58	
Pittsburg	363	70						
Sacramento River Delta								
Collinsville	107	38	24	34	17	22	34	
Emmerton	27	18	20	11	10	16	22	
Threemile Slough Bridge	30	16	8	6	13	12	18	
Rio Vista Bridge	11	16	6	10	9	14	14	
Isleton Bridge	15	16		4	6	10	11	
San Joaquin River Delta								
Antioch	110	67	59	40	30	37	38	
Antioch Bridge	a 61	54	57	56	a 53	52	60	
Jersey Island			29		33	31	33	
Threemile Slough	32		37	b 36	26	33	32	
Oulton Point	31	32	25	42	28	17	a 19	
San Andreas Landing	33	33	6	10	11	9	12	
Opposite Central Landing	15		93	114	118	98	94	
Dutch Slough	60	96	227	a 222	216	d 212	a 222	
East Contra Costa I. D.	187	207	a 170	a 100		a 136	a 116	
Clifton Court Ferry	173		a 144	a 67	119	a 160	a 179	
Mossdale Bridge	180	140	d,e 146		b,d 132	b,d 160		
Vernalis (g)	d 170	d,e 151						
March 1960								
Station	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Pinole	d 9820		9440	6830		10200	a 10300	a 8250
Crockett		7640	5580	3380	b 5030	6400	7050	4850
Benicia	3950	4050	2020	1210	3440	4150	4010	3070
Martinez				132	681			672
West Suisun	1820	2510	a 1090	1090	a 1250	802	a 750	552
Innisfail Ferry	864	695		59	461	1030	995	1220
Port Chicago	1780	2150	349	7	48	38	a 53	a 43
Spoonbill Creek	106	96	67	a 43	21		a 22	
Pittsburg	67	46		a 34				
Sacramento River Delta								
Collinsville	34	36	14	a 12		16	a 14	14
Emmerton	38	29	7	a 8	10	10	d 11	10
Threemile Slough Bridge	22	14	10	8	10	11	8	8
Rio Vista Bridge	21	12	6	7	8	9	8	9
Isleton Bridge	10	14	7	6	11	8	7	6
San Joaquin River Delta								
Antioch	a 53	51	42	a 37	a 29	25	a 20	21
Antioch Bridge	a 70	57	47	a 39	a 41	29	b 22	a 24
Jersey Island			23		18	15	a 11	14
Threemile Slough	33	29	b 18	21	18	13	a 12	13
Oulton Point	31	29	9	a 14	13	6	10	10
San Andreas Landing	24	22	5	a 5	11	7	6	8
Opposite Central Landing	14	9	68	65	52	41	34	29
Dutch Slough	82	89	a 158	b 115	134	87	62	58
East Contra Costa I. D.	206	183		154	86			
Clifton Court Ferry			a 215	208	288	289	318	264
Mossdale Bridge	206	169						
Vernalis (g)								

** Samples taken at four-day intervals approximately one and one-half hours after high high tide.
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 c Taken two days later.
 d Taken over one hour off scheduled time.
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 f Taken two days earlier.
 g Station located above tidal action.

TABLE 200
SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS**

In parts of chloride per million parts of water

Station	April 1960							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Pinole		a 2710	9910	7870	a 10200	a 11800	7770	8580
Crockett	3450	a, c 6400	4300	4430	7830	9700	8280	d 5720
Benicia		a, e 5660			6040	5790		
Martinez								
West Suisun		2920	e 4400	3580		1360	4550	3160
Innisfail Ferry	786	755	725	651	679	627	755	a 724
Port Chicago	145	3150	b 2740	2170			5240	
Spoonbill Creek	20	20	74	39	66	243	364	572
Pittsburg	17							
Sacramento River Delta								
Collinsville	15	a 16		17	21	a 29	138	144
Emmerton	8	a 6	11	15	17	a 15	35	27
Threemile Slough Bridge	13	7	8	11	6	10	8	8
Rio Vista Bridge	8	9	11	12	7	7	9	10
Isleton Bridge	5	4	8	13	7	7	7	8
San Joaquin River Delta								
Antioch	20	20	a 24	a 23	34	a 42	a 104	69
Antioch Bridge	a 19	b 24	a, b 25	a 27	23	a 23	a 35	
Jersey Island				a 8			a 15	
Threemile Slough	8	a 9		7	10	a, d 14	14	12
Culton Point	12	a 11	a 11	7	7	a 9	11	7
San Andreas Landing	9		a 9	7	7	a 10	8	6
Opposite Central Landing		a 6	11	10	7	a 8	a 8	6
Dutch Slough	26	a 30	a 24	20	19	a 18	17	16
East Contra Costa I. D.	46	a 42	40	32	35	27	a 24	27
Clifton Court Ferry		41	32	31	27	27	18	
Mossdale Bridge	204	a 196	248	204	239	204	211	128
Vernalis (g)								
May 1960								
Station	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Pinole		a 13200	a 12500		a 10300		a, d 11700	
Crockett	7550	8400	10200	b 9360	9480	b 10600	9240	9320
Benicia	d 5490	a, d 5470	d 7960	d 7620	d, e 6430	d 9580	a 6750	5690
Martinez								
West Suisun	3630	4850	6950	5750	4540	8910	3920	1040
Innisfail Ferry	849	895	946	a 1270	1200	1240	1060	5460
Port Chicago		2570	5050	5390	3330			3840
Spoonbill Creek	433	149	258	353	360	343	498	528
Pittsburg								298
Sacramento River Delta								
Collinsville	57	a 31	a 66	274	a 98		168	223
Emmerton	18	a 13	19		a 18	a, b, d 32	56	d 31
Threemile Slough Bridge	11	11	a 16	13	-12	13	12	13
Rio Vista Bridge	8	13	13	12	11	12	10	14
Isleton Bridge	11	10	11	9	11	10	10	8
San Joaquin River Delta								
Antioch	58	a 51	a 48	120	a 82	a 112	121	111
Antioch Bridge	35	a 38	a 32	a 45	a 36	a, d 43	36	43
Jersey Island								
Threemile Slough	15	a 12	a 12	a, d 13		a 15	a 13	a, d 12
Culton Point	13	a 11	13	12	a 14	a, b 11	17	14
San Andreas Landing	8	a 11	a 10	14	a 10	15	11	16
Opposite Central Landing	7	a 11	a 11	13	a 14	a 13	10	8
Dutch Slough	d 20	a 28	a 17	d 19	a 21	a, d 25	22	25
East Contra Costa I. D.	22	a 35	23	d 33	a 34	22	b 20	25
Clifton Court Ferry	28		21		23			
Mossdale Bridge	142	151	237	255	a 177	211	171	194
Vernalis (g)								

** Samples taken at four-day intervals approximately one and one-half hours after high high tide.
 * Prejudged.
 a Taken after low-high tide.
 b Taken on following day.
 c Taken two days later.
 d Taken over one hour off scheduled time.
 e Taken on preceding day.
 f Taken two days earlier.
 g Station located above tidal action.

TABLE 220
 SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS**
 In parts of chloride per million parts of water

Station	June 1960							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Pinole	a 10800	a 13300						
Crockett	9300		11100	10400	12200	13500	11600	11700
Poncia	7700	9960	10400	8260	b 9760	16100	11500	9130
Martinez				8430	9650	9920	11100	9280
West Suisun	5300	b 9110	4220	2490	2640	a 2850		a 3080
Innisfall Ferry	1210	1420	2430		5480	8280	9360	7620
Port Chicago	5840	7750	a,d 3890	1680	2240	2140	3300	2820
Spoonbill Creek	458	1490						d 1420
Pittsburg	a 209			a 955		b,d 1460		
Sacramento River Delta								
Collinsville	a 81	a 323	a 817	a 1270	a 1200	a 1530	a 2130	a 1810
Emmerton	a 20	a 38	210	a,d 129	a,d 135	186	864	438
Threemile Slough Bridge	14	12	23	31	37	58	102	73
Rio Vista Bridge	11	12	11	15	12	29	16	14
Isleton Bridge	11	10	7	14	10	12	10	a 11
San Joaquin River Delta								
Antioch	a 92	a 157	626	a 535	a 383	a 1050	1340	a 1010
Antioch Bridge	a,d,e 49	a 57	a 56	a 88	a 158	a 375	a 345	a 485
Jersey Island						a 45	a 53	a,d 79
Threemile Slough	a 16		a 14	a 28		a,b 79	122	
Culton Point		a 17	a 17	a 31	a 24	a 17	d 20	a 24
San Andreas Landing	a 11	a 12	11	a 13	a 15	a 13	12	a 10
Opposite Central Landing		a 12	a 13	14	a 15	a 13	12	a 148
Dutch Slough	a 25	a 34	29	a 28	a 52	73	197	a 48
East Contra Costa I. D.	a 19	a 30	b 20	a 18	20	22	28	
Clifton Court Ferry								a 150
Mossdale Bridge	a 190	211	231	a 248	221	242	268	
Vernalis (g)								
July 1960								
Station	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Pinole				a 14400	a 15300	a 12900	a,d 15900	
Crockett								11100
Poncia		11600	12300	10200	11500	12300	11800	
Martinez								
West Suisun								4600
Innisfall Ferry	3580	4090	a 4340	* 4690	a 4650	a 4820	a 4750	8110
Port Chicago	4220	b 9870	10300	8380	6620	9880	9320	a 4580
Spoonbill Creek	a 2430	a 3670	a 4160	a 3320	a 3580	a 4140	4120	
Pittsburg								
Sacramento River Delta								
Collinsville	a 1590		3440	a 2180	a 2290		3760	a 2850
Emmerton	a 240	a 443	1280	a 682	a 624	a 792	1580	a 1200
Threemile Slough Bridge	87	137	260	144	232	* 220	* 420	316
Rio Vista Bridge	19	25	25	23	26	33	15	14
Isleton Bridge	10	8	11	11	11	10	10	17
San Joaquin River Delta								
Antioch	a 752	a 913	2240	a 1180	a 1145	a 1540	2460	a 1710
Antioch Bridge	a 438	a 464	a 711	425	a 444	a 1490	a 935	776
Jersey Island								
Threemile Slough		a 109	a 150		a,d 125	a 249	a,d 254	a 200
Culton Point	a 67	b 181	170	a 119	a 74	a 188	406	a 68
San Andreas Landing	a 16	a 34	37	a 29	a 50	a 80	105	a 9
Opposite Central Landing	a 11	a 13	13	a 11	a 15	a 8	31	a 394
Dutch Slough	a 134	a 223	240	a 208	a 203	252	353	a 99
East Contra Costa I. D.	a 39	43	50	a 67	81	89	94	
Clifton Court Ferry								
Mossdale Bridge	a 155	267	184	a 213	167	133	108	a 159
Vernalis (g)								

** Samples taken at four-day intervals approximately one and one-half hours after high tide.
 * Presumed.
 a Taken after low-high tide.
 b Taken on following day.
 c Taken two days later.
 d Taken over one hour off scheduled time.
 e Taken on preceding day.
 f Taken two days earlier.
 g Station located above tidal action.

In parts of chloride per million parts of water

Station	August 1960							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Pinole	a 16400		d 15300					
Crockett	* 12700	12600		11200	10000	12300	10600	
Benicia								
Martinez								
West Suisun								
Innisfail Ferry	b 5830	5780	a 5560	a 6000	a 5690	a 6130	a 6610	a 6210
Port Chicago	b 10300	10100	8110	10700	10100	10200	* 9600	10100
Spoonbill Creek	a 4315	a 4950	5020	a 5020	a 4840		4460	4630
Pittsburg								
Sacramento River Delta								
Collinsville	a 2510		a 3350		a 2950	a 4500		a 3070
Emmaton	a 719	a, b 1310	a 2100	a 1190	a 1050	b 810	1590	a 1640
Threemile Slough Bridge	b 271	582	400	b 400	674	595	807	b 390
Rio Vista Bridge	b 33	60	20	b 42	87	13	36	a 13
Isleton Bridge	b 11	14	11	b 12	19	13	12	b 11
San Joaquin River Delta								
Antioch	a 1340	¹⁹⁰⁵	a 2470	a 1950	a 2150	a 2130	2800	a 1800
Antioch Bridge	a 626	a 1280	733	a 837	a 916	a 1400	1160	a 940
Jersey Island								
Threemile Slough	a 212	a 243	a 451	a 327	a 324	a 332	a 306	
Culton Point	a 205	388	a 350	a 278	a 225	371	a 178	
San Andreas Landing	a 51	98	a 102	a 24	a 125	a 107	a 78	a 82
Opposite Central Landing	a, d 18	a 18	15	a 16		28	a 17	a 15
Dutch Slough	a 287	a 397	a 505	*, a 565	*, a 495	548	a 499	a 479
East Contra Costa I. D.		134	a, b 146	a 138	181	188	a 194	a 196
Clifton Court Ferry								
Mossdale Bridge	a 195	213	a 230	a 225	203	181	a 250	a 267
Vernalis (g)								
September 1960								
San Francisco, San Pablo, and Suisun Bays								
Point Pinole		a 15900		a 16300	*, a, e 11800	13400	12800	15200
Crockett			13100				13500	13500
Benicia	9650	13000	12000	e, d 11500	11000	9450	9790	10500
Martinez								
West Suisun								
Innisfail Ferry	a 6130	a 6360	a 3890	a 6320	a 5450	a 5390	a 5500	a 5720
Port Chicago	10700	9200	8550	a 6880	8550	7450	10100	a 8960
Spoonbill Creek	a 5010	a 4080	3450	a 3170	a 3100	2980	2700	a 3250
Pittsburg								
Sacramento River Delta								
Collinsville	a 3100	2700	a 1990	a 1880	a 1760	1590	a 1480	a 1900
Emmaton	a 1040	1120	a 452	a 310	a, d 238	445	548	a 421
Threemile Slough Bridge	892	386	286	b 126	a 90	90		a 81
Rio Vista Bridge	22	11	a 13	b 16	15	21	16	a 18
Isleton Bridge	12	14	14	b 16	11	13	11	a 15
San Joaquin River Delta								
Antioch	a 2180	a 2300	1740	a 819	a 986	1100	1380	a 1000
Antioch Bridge	a 986	a 1310	638	a 390	a 381	248	a 462	a 238
Jersey Island								
Threemile Slough	a 301	a 214	a 143		a 103	d 79	a 61	a 84
Culton Point			119	a 88		80	83	a 69
San Andreas Landing		a 45	a 53	a 40	a 63	15	a 34	a 14
Opposite Central Landing	a 18		a 19	a 18	a 16		a 12	a 14
Dutch Slough	a 455	a 452	*, a 357	a 298	a 233	a 188	a 152	a 145
East Contra Costa I. D.	a 188	197	a 190	a 194	a 188	a 170	a 166	a 135
Clifton Court Ferry				a 138		a 120	a 111	
Mossdale Bridge	244	250	a 260	a 242	a 242	a 234	a 263	a 241
Vernalis (g)								

** Samples taken at four-day intervals approximately one and one-half hours after high high tide.
 * Presumed.
 a Taken after low-high tide.
 b Taken on following day.
 c Taken two days later.
 d Taken over one hour off scheduled time.
 e Taken on preceding day.
 f Taken two days earlier.
 g Station located above tidal action.

TABLE 91.

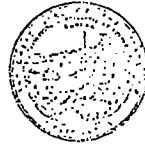
SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS**

In parts of chloride per million parts of water

Station	December 1960							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Pinole	a 1100	9100	7700	8600	10700	8100	a 7100	
Crockett	1310	2190	4600		7200	5700	5400	
Buena Vista								
Martinez								
West Suisun								
Point Pinole Ferry					2900	2600	2100	2100
Port Chicago	2100	570	1910	5400	6100	5700	3800	a 2900
Spoonbill Creek	511	58	79	400	800	420	270	a 378
Pittsburg								
Sacramento River Delta								
Collinsville	200	14	33	327	346	a 33		
Emmerton	227	10	13	16	27	a 15	15	23
Threemile Slough Bridge	218		11	15	15	11	12	15
Rio Vista Bridge	110	8	9	10	9	8	9	10
Isleton Bridge	11	8	8	12	7	7	9	10
San Joaquin River Delta								
Antioch	90	46	32	45	103	56	44	57
Antioch Bridge	13	35	a 32	30	36		35	
Jarvis Island								
Threemile Slough		a 6	22	21				23
Quilco Point	b		d 19		23	a 22	20	
San Antonio Landing		20	22	24	25	a 27	18	24
Opposite Central Landing		a 15	12	20	16	a 13		
Buena Slough		a 48	46	48	50	a 53	56	56
East Contra Costa I. D.		a 153	148	153	a 156	a 160	153	154
Clifton Court Ferry		a 153	139	143	130	128	136	
Mossdale Bridge		a 116	108	131	a 116	a 120	117	a 116
Vernalis (G)								
January 1961								
Station	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Point Pinole			9190	10700	11000	11700	10400	10000
Crockett				8360	7120	6500	7620	7050
Buena Vista	5770							
Martinez								
West Suisun						5100		
Point Pinole Ferry	a 2400	2640		2380	a 3540	2850	2720	2610
Port Chicago	3930			5690		5160	6720	4900
Spoonbill Creek	524	478	551	834	980	700	1030	745
Pittsburg								
Sacramento River Delta								
Collinsville		34		260		133		271
Emmerton	a 20	21		28	39	a 31	51	a 34
Threemile Slough Bridge	13	15	15	16	17	15	19	18
Rio Vista Bridge	10	9		9	10	10	12	13
Isleton Bridge	7	10		10	9	8	8	12
San Joaquin River Delta								
Antioch	71	55	92	130	140	151	193	146
Antioch Bridge	41	a 41		43	47	42	51	54
Jarvis Island								
Threemile Slough	23	25	28	32	a 28	27		31
Quilco Point	22			25	29			32
San Antonio Landing	27	28		29	29	30	26	30
Opposite Central Landing	a 15	a 11	11	10	a 10	11	17	a 16
Buena Slough	15	62		67	a 69	70	d 73	76
East Contra Costa I. D.	157	133		164	a 165	150	153	a 175
Clifton Court Ferry	a 137			138	a 131	141	146	a 161
Mossdale Bridge	a 113	118	122	a 143	a 142	131	a 148	a 132
Vernalis (G)								

EXTRA

** Samples taken at four-day intervals approximately one and one-half hours after high high tide.
 * Presumed.
 a Taken after low-high tide.
 b Taken on following day.
 c Taken two days later.
 d Taken over one hour off scheduled time.
 e Taken on preceding day.
 f Taken two days earlier.
 g Station located above tidal action.



February 8, 1961

STATE OF CALIFORNIA
Department of Water Resources
SACRAMENTO

Salinity Observations, Sacramento-San Joaquin Delta and Upper Bays
For the period January 2 to January 30, 1961, inclusive

Salinity in parts of chloride per million parts of water
Samples taken 1½ hours after High High Tide unless otherwise denoted
(Ocean water contains approximately 18,200 parts)

Stations	1/2	1/6	1/10	1/14	1/18	1/22	1/26	1/30
<u>San Pablo Bay</u>								
Point Pinole								
Crockett			9190	10700	11000	11700	10400	10000
<u>Carcinez Strait</u>								
Benicia	5770			8360	7180	8500	7620	7050
Martinez								
<u>Suisun Bay</u>								
West Suisun						5100		
Innisfail Ferry	a2190	2640		2380	a3540	2880	2780	2610
Port Chicago	3930			5690		5160	6720	4900
Spoonbill Creek	524	478	551	834	980	700	1030	745
Pittsburg								
<u>Sacramento River</u>								
Collinsville		34		260		133		371
Ematon	a20	21		28	39	a31	51	a34
Threemile Slough Br.	18	15	15	16	17	15	19	18
Rio Vista Bridge	10	9		9	10	10	12	13
Isleton Bridge	7	10		10	9	8	8	12
<u>San Joaquin River</u>								
Antioch	71	55	qu	130	140	151	193	146
Antioch Bridge	41	a41		43	47	42	51	54
Jersey Island								
Threemile Slough	23	25	28	32	a28	27		31
Culton Point	22			25	29			32
San Andreas Idg.	27	28		29	29	30	26	30
Cop. Central Idg.	a15	a11	11	10	a10	11	17	a16
Eutch Slough	15	62		67	a69	70	d78	76
E.C.C.I.D.	157	133		164	a165	150	158	a176
Clifton Court Ferry	a137			138	a131	141	146	a161
Hossdale Bridge	a113	118	122	a143	a142	131	a148	a132
Vernalis (p)								

* Presumed a Taken after Low High Tide. b Taken on following day.
c Taken two days later. d Taken over one hour off scheduled time.
e Taken on preceding day. f Taken two days earlier.

x



March 8, 1961

STATE OF CALIFORNIA
Department of Water Resources
SACRAMENTO

Salinity Observations, Sacramento-San Joaquin Delta and Upper Reys
For the period February 2 to February 26, 1961, inclusive

Salinity in parts of chloride per million parts of water
Samples taken 12 hours after High High Tide unless otherwise denoted
(Ocean water contains approximately 18,200 parts)

Stations	2/2	2/6	2/10	2/14	2/18	2/22	2/26
<u>San Pablo Bay</u>							
Point Pinole							
Crockett	7600	5240	5600	4720	3220	4380	6420
<u>Sanvicente Strait</u>							
Benicia	3980	4930	4720	2340			5300
Martinez							
<u>Suisun Bay</u>							
West Suisun	2550	495		186			2960
Innisfail Ferry	2780	1870	1030	995	1380	1090	1100
Port Chicago	2150	412	2020	178	52	531	1580
Spoonbill Creek	310	42	41	35	32	31	40
Pittsburg							
<u>Sacramento River</u>							
Collinsville	a25	16	15	11	12	12	13
Rameton	19	12	14	d13	11	14	11
Threewile Slough Br.	21	18	12	14	12	10	8
Rio Vista Bridge	9	8	11	8	6	10	8
Isleton Bridge	6	4	9	5	7	8	8
<u>San Joaquin River</u>							
Antioch	63	45	40	38	43	40	35
Antioch Bridge		53	51	51		52	45
Jersey Island							
Threewile Slough	a32	30	27	43	28		
Golden Island	30	32	25	30	27	27	27
San Andreas Id.	36	38	23	28	25	11	27
Opp. Central Id.	a110	10	17	28	8	14	
Black Slough	a80	97	80	693	91	70	67
W. of Delta	a182	201	152	198	197	191	a186
Golden Gate Ferry	a110	140	136	170	181	191	185
Yuba Bridge	a121	142	137	a145	190	206	a218

a Taken after low High Tide. b Taken on following day.
c Taken two days later. d Taken one or more hours off scheduled time.
e Taken on previous day. f Taken two days earlier.



April 7, 1961

STATE OF CALIFORNIA
Department of Water Resources

SACRAMENTO
Salinity Observations, Sacramento-San Joaquin Delta and Upper Bays
For the period March 2 to March 30, 1961, inclusive

Salinity in parts of chloride per million parts of water
Samples taken 1 1/2 hours after High High Tide unless otherwise denoted
(Ocean water contains approximately 18,200 parts)

Stations	3/2	3/6	3/10	3/14	3/18	3/22	3/26	3/30
<u>San Pablo Bay</u>								
Crockett				8400	5520		5350	6420
<u>Carquinez Strait</u>								
Benicia	4230	6100	5030	4880	3100	2060	2360	4800
Martinez								
<u>Suisun Bay</u>								
West Suisun	a2970		a1530		1470	595	367	
Innisfail Ferry	533	a910	d943	600	a733	d943	981	a987
Port Chicago	1480	1560	2030					
Spoonbill Creek	42	35	44	47	57	33	34	23
Pittsburg				76				
<u>Sacramento River</u>								
Collinsville	17	16	18	22	a15	22	15	17
Ematon	16	16	14	15	a10	9	7	7
Threemile Slough, Br.	12	14	10	10	10	10	8	6
Rio Vista Bridge	9	11	14	10	11	9	8	7
Isleton Bridge	7	8	9	6	5	5		4
<u>San Joaquin River</u>								
Antioch	a234	32	32	32	32	28	18	a18
Antioch Bridge	45	a46	46	37	a31	28	20	a21
Jersey Island								
Threemile Slough	25	21	18	16	12	13	10	
Culbert Point		23	19	16	a16	13		10
San Andreas Bdg.	22	28	18	14	13	9	8	a9
Opp. Central Bdg.			6	a6	6	8	5	a4
Butch Slough	60	a69	62	58	51	38	34	a32
S.C.S.I.D.	a158	105	95	63	60	103	90	67
Childen Court Ferry	134	152	118	95				
Howdale Bridge	a283	270	250	a301	299	243		228
Yuba Falls (a)								

* Forwarded a Taken after Low High Tide. b Taken on following day.
 c Taken two days earlier. d Taken over one hour off scheduled time.
 e Taken on previous day. f Taken two days earlier.



May 9, 1961

STATE OF CALIFORNIA
Department of Water Resources

SACRAMENTO

Salinity Observations, Sacramento-San Joaquin Delta and Upper Bays
For the period April 2 to April 30, 1961, inclusive

Salinity in parts of chloride per million parts of water
Samples taken $\frac{1}{2}$ hours after High High Tide unless otherwise denoted
(Ocean water contains approximately 18,200 parts)

Stations	L/2	L/6	L/10	L/14	L/18	L/22	L/26	L/30
<u>San Pablo Bay</u>								
Crockett		7050	6930	7540		7770	8840	9630
<u>Carolinez Strait</u>								
Sanicía	2860	5900	b5180	6020	7140		6900	8300
Martinez								
<u>Suisun Bay</u>								
West Suisun	1080	2050	b2170	2270	4230	2860	4550	5490
Innisfail Ferry	a317	.521	a574		a445	a570	a564	a160
Port Chicago						2970	5580	2530
Spoonbill Creek	21	22	a27	a28	a100	a133	a335	a767
Pittsburg								
<u>Sacramento River</u>								
Collinsville	14	16	a11	a12	48	a39	a52	a150
Emmaton	8	10	a9	a9	17	a40	a14	a31
Threemile Slough U.F.		10	b7	8	8	b8	8	9
Rio Vista Bridge	9	13	b6	7	7	b8	7	11
Isleton Bridge	4	7	b5	5	7	b6	7	9
<u>San Joaquin River</u>								
Antioch	15	15	a16	a21	37	a53	a52	a53
Antioch Bridge	a24	18	a14	a20	16	a24	a24	a29
Jerry Island								
Threemile Slough		10	a11	8	a9			
Culton Point	a8	11	a10	a10	10	a10	a18	a11
San Andreas Ldg.	a7	8	a5		10	a9	a5	a10
Opp. Central Ldg.	a7	5		a6	8	a7	8	9
Dutch Slough	32	21	a21	17	13	a18		
A.C.S.L.S.	66	42	39	35	20	a22	a29	20
Christen Court Ferry								
Woodside Bridge	294	273	a296	328	249	a222	210	236
Woodside (g)							243	278

a Taken $\frac{1}{2}$ hour after low high tide. b Taken on following day.
 c Taken two days later. d Taken over one hour off scheduled time.
 e Taken on preceding day. f Taken two days earlier.
 g Sample located about 1/2 mile from bridge.



June 8, 1961

STATE OF CALIFORNIA
Department of Water Resources
SACRAMENTO

Salinity Observations, Sacramento-San Joaquin Delta and Upper Bays
For the period May 2 to May 30, 1961, inclusive

Salinity in parts of chloride per million parts of water
Samples taken 1 1/2 hours after High High Tide unless otherwise denoted
(Ocean water contains approximately 18,200 parts)

Stations	5/2	5/6	5/10	5/14	5/18	5/22	5/26	5/30
<u>San Pablo Bay</u>								
Crockett	11300		11100	11500	11300	10700	11000	11600
<u>Sacramento Strait</u>								
Benicia	9350	7750	8760	9090	10400	8150	8980	
Martinez								
<u>Suisun Bay</u>								
West Suisun		4040		6860	7590	5830	6270	6630
Innisfail Ferry		1020		a1620	1880		a1530	a1700
Port Chicago	5980	a3240	5440	6610	a4820	b5370	5670	6560
Spoonbill Creek	a505	857	a833	a931	798		524	649
Pittsburg					532	416	a186	
<u>Sacramento River</u>								
Collinsville	805	526	a310	a319		a242	a96	a227
Emmaton	65	53	a37	a32	139	a39	a19	a39
Threemile Slough Br.	10	17	14	10	17	b16	13	16
Rio Vista Bridge	8	10	11	17	12	b14	10	12
Isleton Bridge	9	abd12	11	11	15	b15	10	12
<u>San Joaquin River</u>								
Antioch	a117	62	a170	a153	306	a140	a36	a136
Antioch Bridge	a32	47	a44	48	a63	a53	a34	a42
Jersey Island								
Threemile Slough	a13		a3		21			13
Gulton Point		13	a13	16	21	a19	a15	16
San Andreas Ldg.	11	11	a10	12	16	a17	a12	15
Opp. Central Ldg.	12		25	16	14	a13		12
Butch Slough	19	25	a11	26	27	a31		a24
M.S.C.I.S.	22	20	24	24	21	a26	27	24
Clifton Court Ferry				116	30	a31	a23	a23
Hooddale Bridge	220	a218	a238	226	255	a278	231	233
Vernalis (g)	374	305	190	242	a275	a359	213	231

* Reported
 a Taken after Low High Tide. b Taken on following day.
 c Taken two days later. d Taken over one hour off scheduled time.
 e Taken on preceding day. f Taken two days earlier.
 g Station located above tidal action.



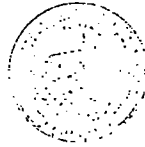
July 7, 1961

STATE OF CALIFORNIA
Department of Water Resources
SACRAMENTO

Salinity Observations, Sacramento-San Joaquin Delta and Upper Bays
For the period June 2 to June 30, 1961, inclusive
Salinity in parts of chloride per million parts of water
Samples taken 1½ hours after High High Tide unless otherwise denoted
(Ocean water contains approximately 18,200 parts)

Stations	6/2	6/6	6/10	6/14	6/18	6/22	6/26	6/30
<u>San Pablo Bay</u>								
Point Pinole								
Crockett			11300	11300		e12600	19900	15600
<u>Carquinez Strait</u>								
Benicia	10100	7940	9160	9190	8170	e11400	11500	13800
Martinez								
<u>Suisun Bay</u>								
West Suisun	7460	7140		7120		e9900	11700	
Innisfail Ferry	1950	a1220		a2100	2110		a2620	
Port Chicago	6730	b4850	6760	6920	5520	e7610	9970	9360
Spoozbill Creek	1010	a1040	a1090	a1250	a2110	a2270	a3820	3230
Pittsburg		bd394		d906		ad1610	ad1900	
<u>Sacramento River</u>								
Collinsville	962	a406	a300	a608	a1270	a1520	a2060	2480
Emmston	150	a49	a32 _a	92	a381	a462	a376	a532
Threemile Slough Br.	18	b17	17	19		49	73	163
Rio Vista Bridge	12	b11	11	12	13	34	24	31
Isleton Bridge	18	11	13	13		12	12	13
<u>San Joaquin River</u>								
Antioch	401	a210	290 _a	a369	536	a537	a900	a1330
Antioch Bridge	a53	a60	a71	a80	168	a220	a366	a445
Jersey Island								
Threemile Slough	20	a17		a18	d24	a82	a100	a92
Culton Point	22	a18	a17	28	a40		a34	127
San Andreas Ldg.	13	a13	a15	15	a17	a17	a29	54
Opp. General Ldg.	11			14	a13	a14	a14	16
Dutch Slough	26	a31	a29	a33	a50	a76	ad111	147
A.S.C.I.S.	23	a29	a33	20	a20	22	24	32
Clifton Court Ferry	22	a23	24	21	a22	a19	a21	624
Wooddale Bridge	24	a238	257	281	a273	a263	183	300
Vernonia (g)	270	a255	303		a340		317	

a - Precipitated a - Taken after low High Tide. b - Taken on following day.
 c - Taken two days later. d - Taken over one hour off scheduled time.
 e - Taken on preceding day. f - Taken two days earlier.
 g - Station located above tidal action.



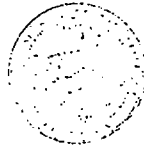
August 8, 1961

STATE OF CALIFORNIA
 Department of Water Resources
 SACRAMENTO

Salinity Observations, Sacramento-San Joaquin Delta and Upper Bays
 For the period July 2 to July 30, 1961, inclusive
 Salinity in parts of chloride per million parts of water
 Samples taken 1 1/2 hours after High High Tide unless otherwise denoted
 (Ocean water contains approximately 18,200 parts)

Stations	7/2	7/6	7/10	7/14	7/18	7/22	7/26	7/30
<u>San Pablo Bay</u>								
Point Pinole								
Crockett	14200	a13600	12500	14900	15400	a15000	14700	14500
<u>Sacramento Strait</u>								
Benicia	13800	e11700	12700	14000	12000	e13600	13700	13600
Martinez								
<u>Suisun Bay</u>								
West Suisun	10700		10300	12300	11000	e13200	13100	12200
Innisfail Ferry	d3910		a5060		6260		a5760	a6520
Port Chicago	9450	e8760	9820	11700	9160	e11900	11300	11000
Spoonbill Creek	3320	a3920	a3830	a5000	a4550	a5180	a5900	5530
Pittsburg		ad2730	a2930		3920			
<u>Sacramento River</u>								
Collinsville	3200		a2660	a3610	a4110	a4300	a4130	4240
Exonaton	709	a682	a1120	1870	a1210	ab1110	a1390	2070
Threemile Slough Br.	266	214	491	607		366	d539	633
Rio Vista Bridge	36	25	69	22	17	27	52	34
Isleton Bridge	13	16	12	13	14	15	14	10
<u>San Joaquin River</u>								
Antioch	1760	a1160	a1820	a2060	2730	a2430	a2550	2930
Antioch Bridge	a641	a463	a738	a981	1220	a1360	a1150	1400
Jersey Island								
Threemile Slough			a174	a258	a402	a428		ad592
Culton Point	161		a206	411	a378	a392	a422	596
San Andreas Idg.	51	a19	107	158	a142	a173	345	134
Opp. Central Idg.	18	a20	a20	26	a16	a16	a16	17
Dutch Slough	140	a216	a179	534	a439	a475	885	737
I.C.C.I.L.	11	a57	64	84	b139	a178	178	212
Clifton Court Ferry	26	a30	31	41				80
Woodside Bridge	316	a284	218	187	ad178	a160	104	86
Marysville (a)	377	a361	355	486	a278		413	383

a - Precipitated b - Taken after Low High Tide. c - Taken on following day.
 c - Taken two days before. d - Taken over one hour off scheduled time.
 e - Taken on preceding day. f - Taken two days earlier.
 g - Within 1/2 hour of tidal action.



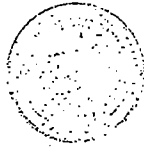
September 8, 1961

STATE OF CALIFORNIA
Department of Water Resources
SACRAMENTO

Salinity Observations, Sacramento-San Joaquin Delta and Upper Bays
For the period August 2 to August 30, 1961, inclusive
Salinity in parts of chloride per million parts of water
Samples taken 1 1/2 hours after High High Tide unless otherwise denoted
(Ocean water contains approximately 18,200 parts)

Stations	8/2	8/6	8/10	8/14	8/18	8/22	8/26	8/30
<u>San Pablo Bay</u>								
Point Pinole								
Crockett			14600	14000	13800	e14100	14200	13900
<u>Sacramento Strait</u>								
Emilia	12900	12100	12600	12700	11500	e12500	12800	11400
Martinez								
<u>Delta Bays</u>								
West Suisun		12100	12100		8460	11700	11200	
Sanibel Ferry	a6350	ad5950	a6520	a6300	6200	a6120	a6140	6000
Port Chicago	9690	10200	10500	9790	a7530	10800	9960	8760
Spoonbill Creek	5030	4940	a5200	4620	3820	4340	a4420	4040
Pittsburg				d3840	2360			d2860
<u>Sacramento River</u>								
Collinsville		a3090	a3650	3860		a2890	a2510	a2670
Emnaton	al440	a724	al110	1570	ab402	a944	a891	a852
Threemile Slough Br.	619	619	566	a278	260	238	232	201
Rio Vista Bridge	32	31	12	12	14	10	13	15
Isleton Bridge	b10	10	13	10	13	14	10	10
<u>San Joaquin River</u>								
Antioch	2790	a2000	a2490	2130	a1640	a1550	1575	a1600
Antioch Bridge		al100	al300		770	a822	a809	671
Jersey Island								
Threemile Slough	a489		a422		a240	a326	a252	a210
Sulton Point	a416	a314	566	355		a256	300	a200
San Andrea Ldg.	a101	a78	44	182	a44	a58	60	a56
Opp. Central Ldg.	a117		34	21	al0	al4	13	al3
Wich Slough	a651	ad614	701	681	a542	a513	489	a382
P.O.O.P.L.	1815	a219	278	269	a370	a258	227	a201
Clifton Court Ferry		a104	107	106	a103	104	102	a94
Wendover Bridge	a124	115	99	101		253		a316
Wendover (2)		115	100	344	a347	300	322	a331

a Taken two days before. b Taken after low high tide. c Taken on following day.
 d Taken one hour off scheduled time.
 e Taken two days earlier.
 f Observed above tidal action.



October 6, 1961

STATE OF CALIFORNIA
Department of Water Resources
SACRAMENTO

Salinity Observations, Sacramento-San Joaquin Delta and Upper Bays
For the period September 2 to September 30, 1961, inclusive
Salinity in parts of chloride per million parts of water
Samples taken 1 1/2 hours after High High Tide unless otherwise denoted
(Ocean water contains approximately 18,200 parts)

Stations	9/2	9/6	9/10	9/14	9/18	9/22	9/26	9/30
<u>San Pablo Bay</u>								
Point Pincle								
Crockett	e13500	13300	13300	13200	12100	12700		10900
<u>Carquinez Strait</u>								
Benicia	e10200	11500		10100	10200	11800	9220	9820
Martinez			a11600	11600	10900	a10500	10600	10400
<u>Suisun Bay</u>								
West Suisun	e9670	9550	9280	9820	9120	9960		
Innisfail Ferry	a6140		a6000	5810	a5930			
Port Chicago	e9010	a7350	8210	8140		8390	a6300	7090
Spoonbill Creek	e4160	a4000	a4380	3840	3240	a3440	3000	3090
Pittsburg		a3050					1420	a1730
<u>Sacramento River</u>								
Collinsville		a2550		a2160	a1550	a1650	a1450	a1380
Ematon	a320	a620	a698	588	a218	a378	418	a273
Threemile Slough Br.	e162	182	181	129	b113	d121	114	108
Rio Vista Bridge	e13	16		17	b15	15	15	15
Isleton Bridge	a12	11	12	15	b13	14	11	14
<u>San Joaquin River</u>								
Antioch	a962	1810	a1270	1570	a727	a634	1180	1020
Antioch Bridge	a547	a484	a404		a308	a284	207	218
Jersey Island								
Threemile Slough		a156	a130	d87	a57	a77	62	a71
Culton Point	a152	a123	179	108	a76	115	73	a73
San Andreas Idg.	21	a57	49	a41	a32	a35	31	a24
Opp. Central Idg.	a12		17	a16	a14	a14	a13	
Butch Slough	a347	a290	262	a232	d185	a182	a143	a125
S.C.C.I.B.		189	176	165	a153	149	127	b113
Clifton Court Ferry	a51	85	91	a89	a80	77	a87	a71
Woodville Bridge	117	d283	d274	d272	d287	d277	a280	a282
Woodville (2)	a281	249			a281	283	a278	a273

a Taken after low High Tide. b Taken on following day.
c Taken two days later. d Taken over one hour off scheduled time.
e Taken on preceding day. e Taken two days earlier.
f Station located above tidal action.



November 7, 1961

STATE OF CALIFORNIA
Department of Water Resources
SACRAMENTO

Salinity Observations, Sacramento-San Joaquin Delta and Upper Bays
For the period October 2 to October 30, 1961, inclusive
Salinity in parts of chloride per million parts of water.
Samples taken 1 1/2 hours after High High Tide unless otherwise denoted
(Ocean water contains approximately 18,200 parts)

Stations	10/2	10/6	10/10	10/14	10/18	10/22	10/26	10/30
<u>San Pablo Bay</u>								
Point Pinole								
Crockett		12200	12900	12200	12700	13800	13900	11300
<u>Sarcouinez Strait</u>								
Bericia	11100	10800	10800		12100	10600	11400	7650
Martinez	10900	12700	11400	12100	11400	12500	12700	10200
<u>Suisun Bay</u>								
West Suisun	8940		a8910		10300	7480	10300	
Innisfail Ferry	a5540	5000	d5250	5000	a5240	d5420	4260	a5470
Fort Chicago	7180	7640	8580	9090		7490	8260	6400
Spornbill Creek	3540	2980	2940	2980	3520	2960	3440	3140
Pittsburg	a1690	2300	c2180		ab3980		2850	d1090
<u>Sacramento River</u>								
Collinsville		1950	2100	a1660	a2180		a1870	1690
Emmaston	a310	470	535	a468	a677	841	a771	207
Threemile Slough Br.	b95	91	a82	173	b209	150	232	80
Rio Vista Bridge	b14	19	13	16			13	11
Isleton Bridge	b17	13	14	11	b12	12	10	9
<u>San Joaquin River</u>								
Antioch	a836	1180	1140	1270	a1770	1520	1690	535
Antioch Bridge	a126	208	199	237	a273	229	214	156
Jersey Island								
Threemile Slough			80	a47				67
Culton Point	a64		81	a59	a109	b92	a63	
San Andreas Ldg.	a23	17	23	a21	a22	14	27	23
Opp. Central Ldg.	a16	15	14	a12		14	a14	12
Butch Slough	a281	114	a116	a101	a105	124	a112	92
O.C.L.D.	a118	96	a100	109	a107	121	a107	111
California Court Ferry	a69	58	a60	a58	a61	a77	a55	59
Wardale Bridge	a81	a238	a380	a292	a264	a280	a261	234
Corralville	a214	201	a280	b243	a309	a262	a214	232

* Present
 a Taken after low High Tide. b Taken on following day.
 c Taken two days later. d Taken over one hour off scheduled time.
 e Taken on preceding day. f Taken two days earlier.
 g Station located above tidal action.

December 9, 1961

DELTA BRANCH



STATE OF CALIFORNIA
Department of Water Resources
SACRAMENTO

Salinity Observations, Sacramento-San Joaquin Delta and Upper Reys
For the period November 2 to November 30, 1961, inclusive
Salinity in parts of chloride per million parts of water
Samples taken 1 1/2 hours after High High Tide unless otherwise denoted
(Ocean water contains approximately 18,200 parts)

Stations	11/2	11/4	11/10	11/14	11/18	11/22	11/26	11/30
<u>Sacramento River</u>								
Delta Bay								
Salt Lake Marsh**	d1500	d14100	d14200	d13000	d13500		d13700	d13800
Knobett	13800	12400	13000	11400	12200	12100		
<u>Carquinez Strait</u>								
Concha	9480	8720	11300	9720	11100			8700
Martinez	10400	811900	9980	10000	11600	9140	7360	1060
<u>Delta Bay</u>								
West Suisun	a08580	7110			6350			a5040
Innisfail Ferry	5470	5290	5040	5070	4510	4840	55350	5000
Port Chicago		7190	8540	6450	6160	6970		a4820
Spoonbill Creek	3170	3240	3500	2870	2980	3150	3170	2500
Pittsburg		1860		a814	2170			2610
<u>Sacramento River</u>								
Collinsville	2060	1520	d1650	a1510	1840	1400	a1320	1210
Winton	451	446	a425	a352	d358	455	a395	278
Three Mile Slough Br.	97	63	139	43	81	67	66	67
Two Vista Bridge	9	8	11	10	17	15	11	15
Isleton Bridge	2	8	10	12		9	8	12
<u>San Joaquin River</u>								
Isleton	1080	920	1220	1140	949	1110	1210	963
Isleton Bridge	134	113	157	a112	107	103	a160	138
Ferry Island								
Chrissie Slough	41	45	48		30	35	46	
Culter Point	64	42	67	a46	47	a44	58	37
San Andreas Idg.	23	19	22	a19	20	21	20	18
Opp. Central Idg.		14	a10	a8		16	a10	11
North Slough	62	75	a69	a61	60	a57	a57	57
W. S. L. S.	71		a54	a55	54	a61	59	61
Isleton Court Ferry	16	57	a60	a65	67	a75		93
Woodlark Bridge	118	a232	a172	a182	216	a224	a212	188
Marshall (a)	118	a184	a162	a205	a220	a208	a180	a192

a Taken after low High tide. b Taken on following day.
c Taken two days later. d Taken over one hour off scheduled time.
e Taken on a following day. f Taken two days earlier.
g Station located above tidal action.



January 8, 1962

DELTA BRANCH

STATE OF CALIFORNIA
Department of Water Resources

SACRAMENTO
Salinity Observations, Sacramento-San Joaquin Delta and Upper Bays
For the period December 2 to December 30, 1961, inclusive
Salinity in parts of chloride per million parts of water
Samples taken 1 1/2 hours after High High Tide unless otherwise denoted
(Ocean water contains approximately 18,200 parts)

Stations	12/2	12/6	12/10	12/14	12/18	12/22	12/26	12/30
<u>San Pablo Bay</u>								
Sobrante Beach	d12200	d11900	d11100	11200	d12200	d12000	ad10900	d10600
Crockett	11100	8300	8700	9570	10600	10100	7790	9350
<u>Carquinez Strait</u>								
Emilia	8980	6570	6300	7040	7410	8130	5740	8040
Martinez	10800	6670	6890	8650	10400	7780		9020
<u>Suisun Bay</u>								
West Suisun							2560	5660
Innisfail Ferry		d4630	2220	2780		2610	3280	bd990
Port Chicago	7370	3980	3800	4070	5940	4930	2410	5690
Spoonbill Creek	2460	553	324	304	582	836	430	587
Pittsburg				648				120
<u>Sacramento River</u>								
Collinsville	1090	213	167	65	232	a162	56	
Emmaton	137	51	a24	32		52	30	23
Threemile Slough Br.	58	24	21	19	20	20	16	15
Rio Vista Bridge	13	9	14	15	16	12	9	12
Isleton Bridge	12	9	14	13	14	10	7	12
<u>San Joaquin River</u>								
Antioch	782	282	88	65	123	167	74	57
Antioch Bridge	95	42	42	37		42	a42	31
Jersey Island								
Threemile Slough					24	23	20	21
Cotton Point	35	a20	a24		d22	d26	a21	d24
San Andreas Ldg.	18	17	17	20	21	20	a20	21
Opp. Central Ldg.	12		a10	16	16		8	
Dutch Slough	60	55	46	46	41	41	43	47
E.S.C. Ldg.	65	76	76	83	76	a85	87	97
Clifton Court Ferry	114	148	a174	175	184	a195	214	228
Washita Bridge	111	a188	a171	204	a223	a221	218	236
Washita (a)	111	a188	a188	211	a222	211	222	236

a - Precipitated a - Taken after Low High Tide. b - Taken on following day.
c - Taken two days later. d - Taken over one hour off scheduled time.
e - Taken on preceding day. f - Taken two days earlier.

WILLIAM E. WAHNE
Director of
Water Resources

EDWARD G. BROWN
GOVERNOR OF
CALIFORNIA

WILLIAM F. WAHNE
ADMINISTRATOR
RESOURCES AGENCY

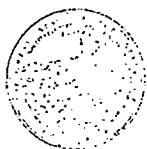
ADVISORY BOARD
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JAMES R. WRIGHT
Chief Deputy Director

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Director—Contracts

REGINALD C. STICE
Deputy Director—Policy

ALFRED R. GOULD
Chief Engineer



February 7, 1962

DELTA BRANCH

THE RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

1120 N STREET, SACRAMENTO

Salinity Observations, Sacramento-San Joaquin Delta and Upper Bays
For the period January 2 to January 30, 1962, inclusive
Salinity in parts of chloride per million parts of water
Samples taken 1/2 hours after High High Tide unless otherwise denoted
(Ocean water contains approximately 18,200 parts)

Stations	1/2	1/6	1/10	1/14	1/18	1/22	1/26	1/30
<u>San Pablo Bay</u>								
Soborante Beach	d12700	d12800	d13300	12800	12700	12300	10900	11200
Crockett	11200	12000	11000	11000	11400	9220		9200
<u>Carcinez Strait</u>								
Benicia	9120	9820	8610	8040	9390	7020	6730	8140
Martinez	10600	9610	8300	a7610		8590	a6200	9510
<u>Suisun Bay</u>								
West Suisun	7100	7040	5660	6460		5160	3800	
Innisfail Ferry	2800	3170	3380	3500	3640	d3540	3640	3100
Port Chicago	6850				7440	3460	3190	5110
Spoonbill Creek	1570	1570	2250	1550	1490	1550	639	632
Pittsburg			ad1030	ab1260	1270		a204	ad136
<u>Sacramento River</u>								
Collinsville	956	790	a856	788	797	836	100	a424
Ematon	41	187	a97	80	167	22	25	28
Threemile Slough Br.	14	20	20	23	21	22	17	14
Rio Vista Bridge	13	15	12	13	14	14	8	9
Isleton Bridge	10	11	18	13	13	10	7	9
<u>San Joaquin River</u>								
Antioch	401	643	460	370	478	498	119	76
Antioch Bridge	37	45	a44	50	51	53	48	45
Jersey Island								
Threemile Slough			a26	26			28	
Culton Point	20	24	25	28	29	31	31	25
San Andreas Idg.	22	23	a24	d28	24	30	a20	31
Opp. Central Idg.	24	a13	a12		22	a8	7	12
Dutch Slough	34	45	a49	53	55	a55	57	57
E.C.C.I.D.	102	106	a133	135	a150	a143	161	
Clifton Court Ferry	211	a237	a241	246	a244	a236	231	221
Wooddale Bridge	a211	a227	a238	208	a217	221	214	222
Vernalis (f)	218	a237	a246	204	a218	ad225	207	224

* Pressured a Taken after Low High Tide. b Taken on following day.
c Taken two days later. d Taken over one hour off scheduled time.
e Taken on preceding day. f Taken two days earlier.
g Station located above tidal action.

WILLIAM E. WARNE
Director
Water Resources

EDWARD G. BROWN
Governor of
California

WILLIAM E. WARNE
Administrator
Resources Agency

ADDRESS ONLY TO
R. 2014-107
Sacramento, Calif.



March 7, 1962

DELTA BRANCH

JAMES S. WRIGHT
Chief, Delta Branch

ALBERT S. COOPER
Chief, Delta Branch

ALBERT S. COOPER
Chief, Delta Branch

THE RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

1120 N STREET, SACRAMENTO

Salinity Observations, Sacramento-San Joaquin Delta and Upper Bays
For the period February 2 to February 28, 1962, inclusive

Salinity in parts of chloride per million parts of water
Samples taken 1 1/2 hours after High High Tide unless otherwise denoted
(Ocean water contains approximately 18,200 parts)

Stations	2/2	2/5	2/10	2/14	2/18	2/22	2/26
<u>San Pablo Bay</u>							
Sobrante Beach	12300	12500	12500	5230	2560	a3160	3680
Crockett		11400	10600	3180	1030	1540	1890
<u>Carquinez Strait</u>							
Berklia	9190	8120	6800	1200	290	97	332
Martinez	9190	11200	a6330	1240	329	a295	a305
<u>Suisun Bay</u>							
West Suisun	1670	6700	5270	542	310	44	78
Innisfall Ferry	2990	d3340	3310	2520	756	436	
Fort Chicago	ad4650		5310	a339	a281	a49	a43
Spoonbill Creek	1670	1460	1740	116	23	a33	38
Pittsburg	1390	1050	1320	70			53
<u>Sacramento River</u>							
Collinsville	729	930	901	44	51	12	14
Armaton	60	d138	69	19	24	7	11
Threemile Slough Br.	17	a21	17	6	5	5	8
Rio Vista Bridge	12	13	7	6	5	8	9
Isleton Bridge	10	10	12	6	9	6	7
<u>San Joaquin River</u>							
Antioch	452	441	485	55	58	a62	56
Antioch Bridge	53	55	a71	54	69	a87	86
Jersey Island							
Threemile Slough	28	d30		d32	d51	30	20
Cultee Point	27	28	24	31	51	47	40
San Andreas Idg.	25	a29	27	13	22	18	16
Opp. Central Idg.	15	a10	7	9	7	10	10
Bulch Slough	58	a64	61	80	143	144	117
E.S.C.I.D.	165	a177	163	222	a211	102	76
Clifton Court Ferry	230	a250	221	182	a60	33	45
Monrovia Bridge	a250	a239	186	a43	a44	33	42
Yardville (r)	215	248	195	a44	39	30	a44

* Taken after low high tide. b Taken on following day.
 c Taken two days later. d Taken over one hour off scheduled time.
 e Taken on preceding day. f Taken two days earlier.
 g Station located above tidal action.

WILLIAM E. WARNE
Director of
Water Resources

GOVERNMENT OF
CALIFORNIA

ADMINISTRATOR
RESOURCES AGENCY

ADDRESS ONLY
P. O. BOX 10
SACRAMENTO 2, CALIF.

JAMES F. WELCH
Chief Deputy Director



April 9, 1962

DELTA BRANCH

ASSOCIATE DIRECTOR
Operations—Construction

RONALD C. PRICE
Deputy Director—Director

THE RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

1120 N STREET, SACRAMENTO

ALFRED F. COLLE
Chief Engineer

Salinity Observations, Sacramento-San Joaquin Delta and Upper Bays
For the period March 2 to March 30, 1962, inclusive

Salinity in parts of chloride per million parts of water
Samples taken 1½ hours after High High Tide unless otherwise denoted
(Ocean water contains approximately 18,200 parts)

Stations	3/2	3/6	3/10	3/14	3/18	3/22	3/26	3/30
<u>San Pablo Bay</u>								
Sobrante Beach	8190	d6570	a3170	3740	6640	a7530	a4500	ae8280
Crockett				bd3600	5110			4870
<u>Carquinez Strait</u>								
Banicia	1310	d3340	169	335	2440	2360	3060	2620
Martinez	3100	3870	a3840	1570	4270	a1150	a2940	2450
<u>Suisun Bay</u>								
West Suisun	566		94	ae76	164		838	ae673
Innisfail Ferry	585	473	937	ae682		a568	614	641
Port Chicago	518	160	a108	44		a141	479	531
Spoonbill Creek	30	38	30	38	36	a36	52	43
Pittsburg	44	61	33	35	26	a35	ad32	25
<u>Sacramento River</u>								
Collinsville	20	18	13	17	16	a21	20	20
Ematon	17	12	9	16	d12	15	16	
Threemile Slough Br.	15	a14	12	10	16	12	16	11
Rio Vista Bridge	16	12	7	7	12	12	11	9
Isleton Bridge	8	8	6	7	10	12	7	7
<u>San Joaquin River</u>								
Antioch	52	48	41	50	41	a37	35	32
Antioch Bridge	77	74	60	50	54	a52	57	42
Jersey Island								
Threemile Slough	26	34	28	26		a24	23	22
Culton Point	21	30	28	33	31	24	22	21
San Andreas Ldg.	34	27	27	22		a21	20	21
Opp. Central Ldg.	12	12	8	8	12		8	9
Dutch Slough	98	83	62	77	89	73	65	54
E.C.O.I.D.	103	a93	95	87	80	82	83	97
Clifton Court Ferry	59	a74	48	44	52	63	65	71
Hondale Bridge	42	a69	25	41	a55	64	66	68
Yarnalla (c)	42	a65	25	ad10	a52	64	63	ad64

* Present a Taken after Low High Tide. b Taken on following day.
c Taken two days later. d Taken over one hour off scheduled time.
e Taken on preceding day. f Taken two days earlier.
g Station located above tidal action.



May 7, 1962
DELTA BRANCH

STATE OF CALIFORNIA
Department of Water Resources

SACRAMENTO

Salinity Observations, Sacramento-San Joaquin Delta and Upper Bays
For the period April 2 to April 30, 1962, inclusive

Salinity in parts of chloride per million parts of water
Samples taken 1 1/2 hours after High High Tide unless otherwise denoted
(Ocean water contains approximately 18,200 parts)

Stations	4/2	4/6	4/10	4/14	4/18	4/22	4/26	4/30
<u>San Pablo Bay</u>								
Sobrante Beach	9010	a7570	b7270	a10000	a9450	a9220	a8490	a8640
Crockett	6110	5100	4400	e7090				
<u>Carquinez Strait</u>								
Benicia		2230	1690	4820	4090	4760	2700	3900
Martinez	4790	a993	a3520	a5290	a3450	a5290	3450	a3620
<u>Suisun Bay</u>								
West Suisun		1190	344		1770			1610
Innisfail Ferry		a555	508	a558		a554	403	
Port Chicago	a473	466	230	1930	a677	a440	1050	1400
Spoonbill Creek	37	a33	28	a24	a19	a18	23	a23
Pittsburg	24	d31	22		17		19	a17
<u>Sacramento River</u>								
Collinsville	16	a21	14	a11	a13		15	
Emmaton	15	15	9	a12	ab9		9	a7
Threemile Slough Br.	14	12	6	6	5	4	6	a6
Rio Vista Bridge	10	6	6	6	5	5	5	10
Isleton Bridge	6	4	4	9	5	5	6	5
<u>San Joaquin River</u>								
Antioch	32	a28	24 ^a	a20	a18	18	15	a16
Antioch Bridge	55	a206	a39	a31	a36	a37	19	a30
Jersey Island								
Threemile Slough	20	a16	11		a10		11	a12
Culton Point	24	16	13		10	12	8	a9
San Andreas Idg.	16	12	12	a9	a8		7	a6
Cap. Central Idg.	9	6	5		a8	4	7	a7
Butch Slough	58	53	39	34	a34	27	22	a18
E.C.S.I.D.	101	93	141	ab91	100	69	47	47
Clifton Court Ferry	171		72	a70	a54	50	47	40
Montezuma Bridge		98	113	a123	150	64	65	60
Wardville (a)	100	90	100	112	137	64	d54	56

a Taken after low High Tide. b Taken on following day.
 c Taken two days later. d Taken over one hour off scheduled time.
 e Taken only once during day. f Taken two days earlier.
 g Station located above tidal action.



DELTA BRANCH
June 8, 1962

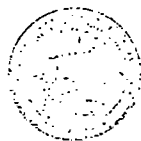
STATE OF CALIFORNIA
Department of Fish and Game
SACRAMENTO

Salinity Observations, Sacramento-San Joaquin Delta and Upper Bays
For the period May 2 to May 30, 1962, inclusive

Salinity in parts of chloride per million parts of water
Samples taken 1½ hours after High High Tide unless otherwise denoted
(Ocean water contains approximately 18,200 parts)

Stations	5/2	5/6	5/10	5/14	5/18	5/22	5/26	5/30
<u>San Pablo Bay</u>								
Sobrante Beach	a10100	a10700	a9400	7750	a11400	a11000	a11400	a11400
Crockett				a5730	8430	7270	8340	9240
<u>Carquinez Strait</u>								
Benicia	5020	5770	4330	5330	5790	6700	5150	d7180
Martinez	a3750	a3700	4580	a3690	a2450	a6330	a4530	4070
<u>Suisun Bay</u>								
West Suisun	4450	2670	2730	3710		3560	1240	6050
Innisfail Ferry	a144			a414	a361	a384	b410	
Port Chicago		a1010	d364	2090	a1310	3140	2050	4190
Spoonbill Creek	a20	46	a74	a32	a36	46	a73	a244
Pittsburg		d35	a40	a20		61		
<u>Sacramento River</u>								
Collinsville	a8	17	a26	a44	a23	36	a18	a20
Emmaton	d8	10	a112	a7	a7		a13	a16
Threemile Slough Br.	a7	10	b12	6	7	9	b11	18
Rio Vista Bridge	5	7	b9	6	7	8	b10	8
Isleton Bridge	7	6	b9	11	7	8	b9	10
<u>San Joaquin River</u>								
Antioch	a15	26	a23	a13	a13	26	a28	a31
Antioch Bridge	a21		a30	a25	a13	22	a20	a25
Jersey Island								
Threemile Slough	a9		a11	a9	a11	12	a13	a12
Culton Point	10	8	a11	a10		11	a13	
San Andreas Ldg.	a8	10	a12	a11	a10	12	a11	a10
Opp. Central Ldg.	a8	d11		a9		8	a15	a9
Dutch Slough	a19	18	a16	a16	16	17	a20	a21
E.C.C.I.D.	41	34	a31	a38	38	38	b60	a41
Clifton Court Ferry	41	39	a38	32	36	38	a41	a41
Wooddale Bridge	68	56	a64	32	66	94	a85	89
Vernalis (g)	64	53	a54	33	d66	82	a82	95

* Presumed a Taken after Low High Tide. b Taken on following day.
c Taken two days later. d Taken over one hour off scheduled time.
e Taken on preceding day. f Taken two days earlier.
g Station located above tidal action.



DELTA BRANCH
July 6, 1962

STATE OF CALIFORNIA
Department of Water Resources

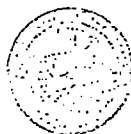
SACRAMENTO

Salinity Observations, Sacramento-San Joaquin Delta and Upper Reys
For the period June 2 to June 30, 1962, inclusive

Salinity in parts of chloride per million parts of water
Samples taken 1½ hours after High High Tide unless otherwise denoted
(Ocean water contains approximately 18,200 parts)

Stations	6/2	6/6	6/10	6/14	6/18	6/22	6/26	6/30
<u>San Pablo Bay</u>								
Sobranie Beach	a1200	a10500	e11500	a12600	a12000	a12900	a10300	a12000
Crockett	9090		e8230	9370	10100			a12000
<u>Carquinez Strait</u>								
Benicia	6710	6560	e5250	7610	8350	9280	e7510	8750
Martinez	a3340	a2590	e7030	a5810	a5700	a9440	e10300	a4580
<u>Suisun Bay</u>								
West Suisun	5720		e3710	5900	7360	7170	e7740	8750
Innisfail Ferry	a445	562	e548		a589	1130		a1170
Port Chicago	a1060		a1750	e5890	4880	e3740	e5640	e6120
Spoonbill Creek	a327	194	a175	a290	a329	389	a608	a1140
Pittsburg		127	a72	a99	a132	204		a360
<u>Sacramento River</u>								
Collinsville	a21	56	a40	a34	181	311	92	
Ematon	23	30	a15	a11	a25	61	a80	
Threemile Slough Pr.	a11	10	a10	a8	9	16	15	26
Rio Vista Bridge	10	9	11	9	8	15	13	10
Islaton Bridge	11	7	10	11	7	14	10	10
<u>San Joaquin River</u>								
Antioch	a32	53	a38	a23	a59	123	a208	a112
Antioch Bridge	26	a31	a23	a28	a28	35		a112
Jersey Island								
Threemile Slough				a15	a13	18		a15
Oulton Point	a12	11	a12	a12	15	16	a16	a15
San Andreas Ldg.	11	11	a8		12	16	a14	a15
Opp. Central Ldg.	a9	7	a8	a7		11	a15	
Dutch Slough	d21	19	a18	a19	21	23	a12	a21
E.C.I.D.	44	52	a41	45	44	40	47	30
Clifton Court Ferry	45	41	a40	35	41	47	a49	45
Yasdale Bridge	128	19	a27	18	45	47	a61	114
Vernalis (g)	124	17	22	21	43	47	59	111

* Presumed. a Taken after Low High Tide. b Taken on following day.
c Taken two days later. d Taken over one hour off scheduled time.
e Taken on preceding day. f Taken two days earlier.
g Station located above tidal action.



DELTA BRANCH
August 7, 1962

STATE OF CALIFORNIA
Department of Water Resources

SACRAMENTO

Salinity Observations, Sacramento-San Joaquin Delta and Upper Bays
For the period July 2 to July 30, 1962, inclusive

Salinity in parts of chloride per million parts of water
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted
(Ocean water contains approximately 18,200 parts)

Stations	7/2	7/6	7/10	7/14	7/18	7/22	7/26	7/30
<u>San Pablo Bay</u>								
Soberante Beach	a13300	a13300	e13300	a14100		14000	e14000	a14300
Crockett							e13600	
<u>Carquinez Strait</u>								
Benicia	9380		e8960	10000	12300	9490	e10500	
Martinez	a9150	8620	e9480	6730	a8300	8850	e11900	a11000
<u>Suisun Bay</u>								
West Suisun								
Innisfail Ferry		1610	a1400	a1740		3250	a2780	a3030
Port Chicago	5580	5760	3942		9370	6480	e8030	9370
Spoonbill Creek	a1150	1400	a1360	a2070	a3380	2800	a3080	a3540
Pittsburg		d710	a909	a986	a1820	ab2350	a1820	a1920
<u>Sacramento River</u>								
Collinsville	a534	805	a708		a1940	a2030	a1710	a2000
Hamaton	a62	d119	a98	a113	b492	389	a268	a425
Threemile Slough Br.	25	23	19	27	187	65	175	121
Rio Vista Bridge		10	10	10	12	52	11	24
Isleton Bridge	10	10	a9	10	11	17	11	10
<u>San Joaquin River</u>								
Antioch	a186	397	a249	a375	a742	a1050	a739	a975
Antioch Bridge	a45	d83	a76	a105	a358	a280	e333	a364
Jersey Island								
Threemile Slough	a14	25	a24	a34	a40			
Oulton Point	25	25	abd17	a28	83	a63	ab64	a82
San Andreas Ddg.	12	d14	a11	a12	16	a20	a12	a22
Opp. Central Ddg.	a11	11	a10	a10		a10	a10	a10
Dutch Slough	24	27	a28	a36	87	a106	a117	a192
E.C.C.I.D.	27	28	25	26	25	a26	34	42
Clifton Court Ferry	33	36	a30	28	23	a24	a24	23
Mossdale Bridge	124	160	a188	250	165	a198	a235	230
Vernalis (g)	142	155	170	160	184	192	210	201

a Taken after Low High Tide.

c Taken two days later.

e Taken on preceding day.

g Station located above tidal action.

b Taken on following day.

d Taken over one hour off scheduled time.

f Taken two days earlier.



DELTA BRANCH
September 7, 1962

STATE OF CALIFORNIA
Department of Water Resources

SACRAMENTO

Salinity Observations, Sacramento-San Joaquin Delta and Upper Bays
For the period August 2 to August 30, 1962, inclusive

Salinity in parts of chloride per million parts of water
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted
(Ocean water contains approximately 18,200 parts)

Stations	8/2	8/6	8/10	8/14	8/18	8/22	8/26	8/30
<u>San Pablo Bay</u>								
Sobrante Beach	a14300	14600	e14400	a14300	a14300		a14300	15500
Crockett	13000	12400	e11800	12700	12500	13200	11600	13200
<u>Carquinez Strait</u>								
Benicia	11400	10200	e10800	11200	10500	11600	11200	10300
Martinez	a11600	12400	e9650	7930	a9690	9580		a10500
<u>Suisun Bay</u>								
West Suisun		9770	e9020	11100	8290	11000	9350	8100
Innisfail Ferry		a3560	a3270	ab3690	a4040		a4040	
Port Chicago	8360	7690	e8140	9080	8600	8670		
Spoonbill Creek	3130	2970	a3100	a3120	2910	a2980	a3080	a2690
Pittsburg		ad1600	a1690	a1310		d1600	ab1370	a1100
<u>Sacramento River</u>								
Collinsville	2430	a1690	a1350			a1560	a1820	
Exmaton	622	a456	ac206	a163	335	a204	a114	353
Threemile Slough Br.	124	71	a58	a91	67		101	114
Rio Vista Bridge	12	11	10	20	13	b10	12	12
Isleton Bridge	10	12	10	a11	10	b9		11
<u>San Joaquin River</u>								
Antioch	1630	a1060	a664	a683	1380	a851	a803	1180
Antioch Bridge	a479	369	a303		a365	a325	a442	a436
Jersey Island								
Threemile Slough	111	a88	a58	a62	93	a77	a130	a107
Culton Point	121	a79	a52	114	77	ab73	a116	150
San Andreas Ldg.	26	a24	a22	a20	35	a18	a43	
Opp. Central Ldg.	12		a11	12	10	a15	a22	20
Dutch Slough	181	ad163	a149	a138	123	ad124	a183	183
E.C.C.I.D.	47	ad159	58	62	63	a66	69	77
Clifton Court Ferry			a29	31	32	a30	29	32
Wooddale Bridge	231	a210	a193	183	212	a202	209	190
Vernalis (g)	203	171	186	183	208	184	167	183

a Taken after Low High Tide.

c Taken two days later.

e Taken on preceding day.

g Station located above tidal action.

b Taken on following day.

d Taken over one hour off scheduled time.

f Taken two days earlier.

WILLIAM E. WARNE
 Chief Engineer
 Department of Water Resources

EDWARD J. BROWN
 Governor of
 California

WILLIAM E. WARNE
 Administrator
 Resources Agency

ADDITIONAL COPY TO
 SACRAMENTO
 DIVISION

WILLIAM E. WARNE
 Chief Engineer

EDWARD J. BROWN
 Governor of California

WILLIAM E. WARNE
 Chief Engineer

WILLIAM E. WARNE
 Chief Engineer



DEWEEA PUNCH
 October 8, 1962

THE RESOURCES AGENCY OF CALIFORNIA
 DEPARTMENT OF WATER RESOURCES

1120 H STREET, SACRAMENTO

Solinity Observations, Sacramento-San Joaquin Delta and Upper Bays
 For the period September 2 to September 30, 1962, inclusive

Solinity in parts of chloride per million parts of water
 Samples taken 1-1/2 hours after High High Tide unless otherwise denoted
 (Ocean water contains approximately 18,200 parts)

Stations	9/2	9/6	9/10	9/14	9/18	9/22	9/26	9/30
<u>San Pablo Bay</u>								
Sobrante Beach	15600	15500	a14900	a14500	14400	a14100	a13500	13100
Crockett	11900	11400	a12200	12500	12700	e10200	11000	a9930
<u>Carguinez Strait</u>								
Benicia	a8980	10600	e11500	9150	9000	e8400	8490	7120
Martinez	10300	ad7920	a9770			e9260	10300	8620
<u>Suisun Bay</u>								
West Suisun	8170	8640	9210	6820	8680	e6370	6800	5230
Innisfail Ferry	4720	a4530	a4340		3550	e3400		
Port Chicago	6000	7920	6600		6420	bd5380	6600	3240
Spoonbill Creek	2640	a2260	a2450	a1890	a1790	a1180	a1200	1030
Pittsburg		a1230	a590		a849	a613	a476	ab487
<u>Sacramento River</u>								
Collinsville	1400	a792	a745	a637	a660	a401	a444	328
Ematon	abd86	a75	a85	a98	a151	a56	a111	105
Threemile Slough Br.	111	42	38	75	a51	34	42	a27
Rio Vista Bridge	10	14	13	15	14	17	13	8
Isleton Bridge	12	18	16	16	14	11	12	8
<u>San Joaquin River</u>								
Antioch	635	a613	a542	ad519	a377	a218	a396	287
Antioch Bridge	363	316	a274	a244	a189	a132	ad113	79
Jersey Island						a80	a84	57
Threemile Slough	a125	ad122	a112	a94	a71	a50	a37	27
Oulton Point	a125	ad104		103	a75		ac27	a26
San Andreas Idg.	a42	a51	a57	47	a35	a16	a21	19
Opp. Central Idg.	a27	a22		17	a18		10	a10
Dutch Slough	a173	a165	ad186	172	a142	a108	a84	a73
E.C.C.I.D.	a373	a78	a85	a92	a90	a89	92	a84
Clifton Court Ferry	a32	a39	a39	46	a51	a53	55	a55
Wooddale Bridge	a183	a171	151	190	a174	a161	160	a150
Yerwood	158	172	149	196		151	169	154

a Taken after low high tide

c Taken two days later.

e Taken on previous day.

g Station located above tidal action.

b Taken on following day.

d Taken over one hour off scheduled time.

f Taken two days earlier.

E. ALBERT GONZALES
 Chief Deputy Director

HERNANDEZ C. PINER
 Deputy Director Policy

MARY GARDNER
 Deputy Director
 Administration

ALBERT R. COUPE
 Chief Engineer



DELTA BRANCH
 November 8, 1962

THE RESOURCES AGENCY OF CALIFORNIA
 DEPARTMENT OF WATER RESOURCES

1120 N STREET, SACRAMENTO

Salinity Observations, Sacramento-San Joaquin Delta and Upper Bays
 For the period October 2 to October 30, 1962, inclusive

Salinity in parts of chloride per million parts of water
 Samples taken 1-1/2 hours after High High Tide unless otherwise denoted
 (Ocean water contains approximately 18,200 parts)

Stations	10/2	10/6	10/10	10/14	10/18	10/22	10/26	10/30
<u>San Pablo Bay</u>								
Sobrante Beach	13300	a12700	a14200	11900	a1530	4490	7520	8680
Crockett	11400	10700	a11500	9910	2940		4760	6230
<u>Carguinez Strait</u>								
Honick	7320	9180	a9730	7920	944	4530	3970	5190
Martinez	a9000	a3470	a9070	a3370	1320	3580	2910	a3970
<u>Suisun Bay</u>								
West Suisun	7320	b3320	7030		755	a2944		2470
Innisfail Ferry	2740	a2390			a1510			
Port Chicago	6460	6130	a7330	2030	566	755	781 969	-cont in file #121
Spoonbill Creek	1010	a1490	a1250	1560	a212	85	71	55
Pittsburg	492		a642		a142	61	19	29
<u>Sacramento River</u>								
Collinsville	a426	a447	a332	247	a63		40	31
Ematon	a123	a53	a150	40	b16	13	11	15
Threemile Slough Br.	21		19	15	8	13	13	a10
Rio Vista Bridge	a9	8	8	12	8	11	16	13
Isleton Bridge	8	7	11	a10	8	9	12	7
<u>San Joaquin River</u>								
Antioch	a246	a200	a703	311	a75	58	30	24
Antioch Bridge	a71	53	a67	78	51	45	37	31
Jorday Island	73	a47	a58	64	a30	28	26	a22
Threemile Slough	26		a29	23	a13		18	a18
Oulton Point	a27	a25	a34	69	20	19	16	17
San Andreas Idg.	13	20	a19	13	a16	19	18	17
Opp. Central Idg.	a12		a14	12	a10	11	a411	a11
Dutch Slough	a66	a54	a50	d50	a45	43	a43	33
B.C.C.I.D.	a91	a36	36	59	a90	104	a113	a106
Clifton Court Ferry	a53	a53	54	a53	a97	113	a113	a117
Mescalito Bridge	a140	a140	190	a137	a123	170	a177	a123
Venocia	b337	145	174	123	113	a151	151	129

a Taken after low high tide.

c Taken two days later.

e Taken on preceding day.

f Station located down tidal action.

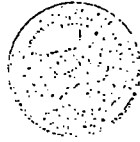
b Taken on following day.

d Taken over one hour off scheduled time.

g Taken two days earlier.

h Taken 3 days later.

E. JACOBSON, CHIEF OF BUREAU
 CALIFORNIA DEPARTMENT OF WATER
 RESOURCES
 DEPARTMENT OF WATER RESOURCES
 DELTA BRANCH



DELTA BRANCH
 December 7, 1962

WILLY GARDNER
 Deputy Director
 Delta Branch

ALBERT J. COLE
 Chief Engineer

THE RESOURCES AGENCY OF CALIFORNIA
 DEPARTMENT OF WATER RESOURCES

1150 N STREET, SACRAMENTO

Salinity Observations, Sacramento-San Joaquin Delta and Upper Bays
 For the period November 2 to November 30, 1962, inclusive

Salinity in parts of chloride per million parts of water
 Samples taken 1-1/2 hours after High High Tide unless otherwise denoted
 (Ocean water contains approximately 18,200 parts)

Stations	11/2	11/6	11/10	11/14	11/18	11/22	11/26	11/30
<u>San Pablo Bay</u>								
Sebrante Beach	8600	9020	11000	10400	a9500	13000	11700	10200
Crockett		a7190	9770	8540	7130	9220	10000	7670
<u>Carquinez Strait</u>								
Benicia	4200	4630	5960	7340	4050	8100	4920	5200
Martinez	7500	5820	a6930	7900	5710	8960	9250	8290
<u>Suisun Bay</u>								
West Suisun	1730	2120		4400	1390	5180		4000
Innisfail Ferry	843	935			1030	1040		1240
Port Chicago	1470			d3170		4360	6090	2640
Spoonbill Creek	a56	65	135	260	138	145	357	280
Pittsburg		27	bd61	136	53	de63	314	81
<u>Sacramento River</u>								
Collinsville	23	21	27	a26	26	25	48	a41
Knutton	bd15	16	18	28	20	17	19	a18
Threemile Slough Br.	12	10		12	12	11	13	11
Rio Vista Bridge	12	10	12	15	9	10	12	9
Isleton Bridge	7	8	9	9	7	9	7	4
<u>San Joaquin River</u>								
Antioch	a25	24	44	52	39	42	61	46
Antioch Bridge	34	34	a29	35	30	30	31	29
Jersey Island	22	22	22	a22	a22	22	22	34
Threemile Slough	a19		18	a17		20	18	d18
Oulton Point	20	19	cd18	18	20	bd21	a19	a18
San Andreas Idg.	a21	20	18	18	23	19	20	19
Opp. Central Idg.	a10		a9	a9	13		a9	a3
Dutch Slough	a41	40	42	a43	41	43	42	a46
E.C.C.I.D.	a115	120	a115	a134	142	139	a152	a153
Clifton Court Ferry		123	a132	a134	136	129	a133	a118
Wooddale Bridge	a135	138	a125	a126	120	120	a94	a59
Vernalis (g)	132	130	120	122	117	113	90	124

a Taken after Low High Tide.
 b Taken on following day.
 c Taken two days later.
 d Taken on preceding day.
 e Station located above tidal action.

f Taken two days earlier.
 g Station located above tidal action.

WILLIAM E. WAHNE
 Director
 of Fisheries

DEPARTMENT OF FISH AND GAME
 GOVERNOR OF CALIFORNIA

WATER RESOURCES
 ADMINISTRATOR
 RESOURCES AGENCY

ADDRESS ONLY TO
 P. O. BOX 570
 SACRAMENTO 2, CALIF.

R. JERRY G. DINEEN
 Chief Hydrographer

RONALD C. SPIES
 District Hydrographer

WALTER G. WILSON
 District Hydrographer

ARVID E. GUNDEL
 Chief Engineer



DELTA BRANCH
 January 2, 1963

THE RESOURCES AGENCY OF CALIFORNIA
 DEPARTMENT OF WATER RESOURCES

1170 N STREET, SACRAMENTO

Salinity Observations, Sacramento-San Joaquin Delta and Upper Bays
 For the period December 2 to December 30, 1962, inclusive

Salinity in parts of chloride per million parts of water
 Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
 (Ocean water contains approximately 18,200 parts)

Stations	12/2	12/6	12/10	12/14	12/18	12/22	12/26	12/30
<u>San Pablo Bay</u>								
Sobranito Beach	9940	9890	10200	10200	8140	8790	7360	8350
Crockett	7330	7040	8580	7000	7130	5900	5670	5590
<u>Carquinez Strait</u>								
Bonicia	4510	5070	5130	5460	4740	broken	3280	3080
Martinez	6360	7830	7710	5980	5070	6520	6360	
<u>Suisun Bay</u>								
West Suisun	2320		a2630	d3080	2410	1130	1390	810
Innisfail Ferry				728	1010			713
Port Chicago			2580		1450	2760		
Spoonbill Creek	171	71	38	72	46	23	30	
Pittsburg		34		29	a27		24	
<u>Sacramento River</u>								
Collinsville	37	20	15	a10	12	15	11	12
Emmerton	15	10	10	10	9	8	10	11
Threemile Slough Br.	12	10	11	7	11	7	13	10
Rio Vista Bridge	8	7	5	6	7	11	8	7
Isleton Bridge	8	4	4	7	3	5	6	7
<u>San Joaquin River</u>								
Antioch	a32	27	21	a28	30	28	22	a30
Antioch Bridge	32	36	31	a36	40	42	34	a39
Jersey Island	a22	a23	22	23	24	30	a28	
Threemile Slough		20	17		25			
Gulton Point		18	15	16	23	21	21	24
San Andreas Ldg.	a22	20	18	41	21	16	22	25
Opp. Central Ldg.	a9	6				6	8	11
Ditch Slough	a17	48	50	a53	56	65	62	a65
B.C.C.I.D.	a167	164	a148	a140	133	128	a129	a132
Clifton Court Ferry	a99	90	a88	a80	88	98	a80	a87
Wooddale Bridge	a74	80	a72	a92	100	78	a82	a92
Vernalis (g)	109	68	a64	dc69	100	59	66	75

a Taken after Low High Tide.

c Taken two days later.

e Taken on preceding day.

g Station located above tidal action.

b Taken on following day.

d Taken over one hour off scheduled time.

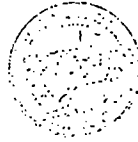
f Taken two days earlier.

S. ARTHUR GORTNER
Chief Deputy Director

STONARD C. PRICE
Deputy Director

MILLY GORTNER
Deputy Director
Aquaculture

ARTHUR R. GORD
Chief Engineer



DELTA BRANCH
February 3, 1963

THE RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

1127 N STREET, SACRAMENTO

Salinity Observations, Sacramento-San Joaquin Delta and Upper Bays
For the period January 2 to January 30, 1963, inclusive

Salinity in parts of chloride per million parts of water
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Stations	1/2	1/6	1/10	1/14	1/18	1/22	1/26	1/30
<u>San Pablo Bay</u>								
Sobrante Beach	8230	9060	9120	8680	8250	10600	11000	11100
Crockett	5780	a7480	7340	5340	7290			9250
<u>Carquinez Strait</u>								
Bonicia	2810	5400	4470	2540	6070	7580	6380	ba6090
Martinez	5130	4470	7110	a5670	7360	9180	8020	a8310
<u>Suisun Bay</u>								
West Suisun	1160	2530		2140	acl1840		4030	3790
Innisfail Ferry		492		641		654		1200
Port Chicago		2330	2060	443	4340	4240	4070	4070
Spoonbill Creek	30	32	62	42	57	376	431	444
Pittsburg	27	bd27		a34	47	296		146
<u>Sacramento River</u>								
Collinsville	12	22	14	24	20	142	52	106
Emerton	11	14	17	14	17	18	26	bd31
Threemile Slough Br.	8	7	9	9	15	13	16	14
Rio Vista Bridge	8	8	10	9		9	16	13
Isleton Bridge	5	5	9	8	7	8	7	5
<u>San Joaquin River</u>								
Antioch	27	27	33	36	35	43	73	91
Antioch Bridge	43	46	47	47	45	42	50	47
Jersey Island		29	33	37	36	32	35	46
Threemile Slough	25	23	25	30	27	26	26	
Colton Point		21		29	29	bd23	19	21
San Andreas Div.		29	23	31	10	12	23	21
Opp. Central Div.	8		a8	9	7	10	a9	10
Dutch Slough	67	66	64	62	d63	61	64	49
E.C.O.L.D.	135	130	a128	128	127	132	127	132
Clifton Court Ferry	96	107	a99		127	132	a136	139
Wooddale Bridge	100	a97	a106	102	133	a146	a155	179
Yreaville (a)	110	100	a96	109	136	156	148	172

a Taken about low High Tide.

c Taken two days later.

e Taken one day earlier.

g Station has no tidal action.

b Taken on following day.

d Taken over one hour off scheduled time.

f Taken two days earlier.

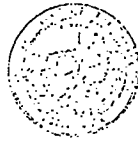
WILLIAM E. WAHNE
 Director of
 Water Resources

EDMUND G. BROWN
 GOVERNOR OF
 CALIFORNIA

HUGO FISHER
 ADMINISTRATOR
 RESOURCES AGENCY

ADDRESS ONLY TO
 R. O. BOX 100
 SACRAMENTO, CALIF.

K. ALTON GOLDBERG
 Chief Deputy Director



STOWEN C. PRICE
 Deputy Director Policy

DELTA BRANCH
 March 3, 1963

NEILY GARDNER
 Deputy Director
 Administration

ALBERT S. GOTTÉ
 Chief Engineer

THE RESOURCES AGENCY OF CALIFORNIA
 DEPARTMENT OF WATER RESOURCES

1120 N STREET, SACRAMENTO

Salinity Observations, Sacramento-San Joaquin Delta and Upper Bays
 For the period February 2 to February 26, 1963, inclusive.

Salinity in parts of chloride per million parts of water.
 Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
 (Ocean water contains approximately 18,200 parts)

Stations	2/2	2/6	2/10	2/14	2/18	2/22	2/26
<u>San Pablo Bay</u>							
Sobrante Beach	4700	1440	4690	2200	3470	4490	a6170
Crockett	3550	763	2400	1670	1970	3970	3370
<u>Carquinez Strait</u>							
Bonicia	1910	54	514	1060	250	2800	810
Martinez	2850	38	935	Leaked	386		a1570
<u>Suisun Bay</u>							
West Suisun	496		76	59		492	178
Innisfail Ferry	1050	142	226		255	337	a4530
Port Chicago	bd37		35	19		a374	33
Spoonbill Creek	173	8	14	19	20	31	a29
Pittsburg		14			ba25	32	ab34
<u>Sacramento River</u>							
Collinsville	d16	9		22	14	18	a48
Emmaton	15	4	12	abd11	13	11	14
Threemile Slough Br.	3	5	7	13	6	10	11
Rio Vista Bridge	12	4	6	10	4	11	12
Isleton Bridge	1	3	6	6	6	8	5
<u>San Joaquin River</u>							
Antioch	37	30		48	40	35	a34
Antioch Bridge	47	47	66	70	77	58	a61
Jersey Island	49	30	37	40	33	35	a30
Threemile Slough	24	21	25	28	24	19	25
Oulton Point	26	29	33	41	29	24	23
San Andreas I.Ag.	22	19	22	32	29	22	23
Opp. Central I.Ag.	8	8	a3	9	8	14	10
Dutch Slough	49	79	93	86	74	a68	64
E.C.C.I.D.	124	148	abd99	118	93	a103	118
Clifton Court Ferry	153	a23	a32	24	27	a31	44
Kossdale Bridge	122	a13	a30	23	24	a42	52
Vernalis (g)	46	12	32	21	20	41	54

a Taken after Low High Tide.

b Taken on following day.

c Taken two days later.

d Taken over one hour off scheduled time.

e Taken on preceding day.

f Taken two days earlier.

g Station located above tidal action.

5. J. H. GUNNERS
 Chief Deputy Director
 RICHARD C. BRICE
 Deputy Director in Charge

NELLY GARDNER
 Deputy Director
 Administration

ALBERT J. COLE
 Chief Engineer



DMWA BRANCH
 April 8, 1963

THE RESOURCES AGENCY OF CALIFORNIA
 DEPARTMENT OF WATER RESOURCES

1129 N. STREET, SACRAMENTO

Salinity Observations, Sacramento-San Joaquin Delta and Upper Bays
 For the period March 2 to March 30, 1963, inclusive.

Salinity in parts of chloride per million parts of water.
 Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
 (Ocean water contains approximately 18,200 parts)

Stations	3/2	3/6	3/10	3/14	3/18	3/22	3/26	3/30
<u>San Pablo Bay</u>								
Sobranie Beach	6360	8060	9090	a11200	7860	12300	a11400	5340
Crockett	a3860	6700		7280	5730	11200	10100	5920
<u>Carguinez Strait</u>								
Benicia			5420	3750	3650	6700	7090	3400
Martinez	3030	6890		5630	6540	9510	a5730	3980
<u>Suisun Bay</u>								
West Suisun	1530			2800	ae1070	510	2600	819
Innisfail Ferry	479			a476	524	529	a752	a752
Port Chicago	465	1616	1690	2620	ae1140		2820	680
Spoonbill Creek	29	31	32	a34	46	284	a246	49
Pittsburg		24	30	abd32	40		a95	73
<u>Sacramento River</u>								
Collinsville		17	27	25	23	30	a30	23
Emmaton	15	14	abd16	19	18	21	a23	14
Threemile Slough Br.	9	11	14	16	14	15	14	11
Rio Vista Bridge	7	14	11	14	14	16	11	7
Isleton Bridge	4	6	11	8	12	9	7	2
<u>San Joaquin River</u>								
Antioch	25	31	34	a32	30	58	a49	36
Antioch Bridge	55	38	a50	a45	40	49	a42	42
Jersey Island	31	31	30	29	28	27	a27	27
Threemile Slough	24	25			22	21	16	
Culton Point	bd29	27	a22	16	bd24	17	17	21
San Andreas Idg.	24	19	20	19	16	10	12	16
Opp. Central Idg.	20	10	a12	12	12		11	8
Dutch Slough	43	52	26	53	49	48	51	54
F.C.C.I.D.	131	133	a121	92	61	67	73	
Clifton Court Ferry	62	a71	a77	82	77		73	133
Wooddale Bridge	62	a109	a132	133	143	a196	129	56
Vernalis (g)	50	114	136	186	114	201	137	19

a Taken after low high tide.
 b Taken two days later.
 c Taken on preceding day.
 d Station located above tidal action.

b Taken on following day.
 d Taken over one hour off scheduled time.
 f Taken two days earlier.

P. LESON COLONIS
 Deputy Director
 REGINALD C. PRICE
 Deputy Director Policy
 NIKKY GARDNER
 Deputy Director
 Administration
 ALFRED A. GOLDF
 Chief Engineer



DELTA BRANCH
 May 9, 1963

THE RESOURCES AGENCY OF CALIFORNIA
 DEPARTMENT OF WATER RESOURCES

1120 N. STREET, SACRAMENTO

Salinity Observations, Sacramento-San Joaquin Delta and Upper Bays
 For the period April 2 to April 30, 1963, inclusive.

Salinity in parts of chloride per million parts of water.
 Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
 (Ocean water contains approximately 18,200 parts)

Stations	4/2	4/6	4/10	4/14	4/18	4/22	4/26	4/30
<u>San Pablo Bay</u>								
Sobrante Beach	5150	adf8450	a3790	a2010	a2670	a2950	a2770	3610
Crockett	1460	4180	2230	874	1070	1140	1260	807
<u>Carquinez Strait</u>								
Benicia	291	2620	158	85	b655	316		277
Martinez	583	2720	a3570	801	a22		dc366	221
<u>Suisun Bay</u>								
West Suisun	78	121	46	48	dc29	35	30	ae70
Innisfail Ferry	607		a170	ad121		a86	a109	
Port Chicago	24	dc303	d20		b17		d56	ae61
Spoonbill Creek		a19	a12	10	a7	a12	a10	8
Pittsburg	bd21				a7	abd23	a21	16
<u>Sacramento River</u>								
Collinsville	10	a12	a16	4	a6		7	10
Emmaton	6	a7	a2	bd10	a4	a3	9	6
Threemile Slough Br.	10	8	a3	3		3	d5	5
Rio Vista Bridge	6	11	5	5	b6	4	4	4
Isleton Bridge	5	4	3	2	b3	3	2	5
<u>San Joaquin River</u>								
Antioch	23		a31	24	a27	a25	19	20
Antioch Bridge	44	a43	42	36	a42	a39	33	32
Jersey Island		a25	a29	40	a30	a26	a23	22
Threemile Slough	16	a25	a15		a7	a9		
Culton Point	26	a28		16		14	13	13
San Andreas Ldg.	6	a21	a9	5	a17	a12	11	12
Opp. Central Ldg.	6			2	a4	a5	3	
Dutch Slough	48	54	67	65	a56	a43	42	40
E.C.C.I.D.	bd133	131	all4	61	a56	66	35	43
Clifton Court Ferry	32	39	36	17	a22	27	22	21
Mossdale Bridge	22	36	22	17	a27	17	15	23
Vernalis (g)	22	44	17	22	27	17	15	24

a Taken after Low High Tide.

c Taken two days later.

e Taken on preceding day.

g Station located above tidal action.

b Taken on following day.

d Taken over one hour off scheduled time.

f Taken two days earlier.

WILLIAM E. WARNE
Director of
Resources

EDMUND G. BROWN
GOVERNOR
CALIFORNIA

HUGO F. ...
ADMINISTRATIVE
RESOURCES AGENCY

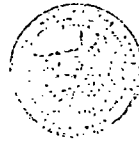
ADMINISTRATIVE
RESOURCES AGENCY
SACRAMENTO, CALIF.

STANFORD ...
Chief Deputy Director

HOWARD C. ...
Deputy Director

NORMAN ...
Deputy Director

ALBERT ...
Chief Engineer



REPORT NUMBER
June 7, 1963

THE RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

1120 N. STREET, SACRAMENTO

Salinity Observations, Sacramento-San Joaquin Delta and Upper Bays
For the period May 2 to May 30, 1963, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Stations	5/2	5/6	5/10	5/14	5/18	5/22	5/26	5/30
<u>San Pablo Bay</u>								
Sobrante Beach	3270	a6040	a7330	a5150	a3910	a7920	a7520	a8510
Crockett	2670		3790	2320	5540	5150	3860	e3960
<u>Carquinez Strait</u>								
Benicia	1090	2820	2180	792	3910	4060	2370	e2670
Martinez	1460	a1390	a2030	1140	5150		3960	e2970
<u>Suisun Bay</u>								
West Suisun	129	317	163	287	2250	4460	193	e366
Innisfail Ferry		a134		148	a121			
Port Chicago	bd33	d24	40	16	bd1110	624	44	
Spoonbill Creek	a15	a12	a14	15	a14	a12	12	a12
Pittsburg	a18		a15	13	a13	a12	a15	
<u>Sacramento River</u>								
Collinsville	a8	a8	a11	10	a17	a16	12	a8
Exmaton	a8	a6	5	6		a7	a9	
Threemile Slough Dr.	a8	a8	7	6	a6	a6	d7	a9
Rio Vista Bridge	7	15	5	5	9	7	12	8
Isleton Bridge	2	3		6	4	6	4	6
<u>San Joaquin River</u>								
Antioch	a20	a21	15	15	a16	a17	14	a15
Antioch Bridge	a37	a34	a37	33	a27	a29	27	a22
Jersey Island	a16	a19	a15	15	a18	a14	14	a18
Threemile Slough		a13	ad10		a16	a11		a12
Culton Point	a18	14	12	12	abd14	11	12	a14
San Andrea Ldg.	a8	a11	10	13	a9	a9	12	a8
Opp. Central Ldg.	a5	a7	7	6	acd6			a6
Dutch Slough	ad42	34	33	32	a32	32	21	a26
E.C.C.I.B.	a70	a66	69	55	a43	77	50	40
Clifton Court Ferry	a32	29	28	12	a35	28	15	a14
Woodale Bridge	a26	26	29	12	a34	17	13	a10
Verona (g)	36	27	30	12	2	d12	11	

a Taken after low high tide.

b Taken on following day.

c Taken two days earlier.

d Taken over one hour off scheduled time.

e Taken on previous day.

f Taken two days earlier.

g Station located above tidal action.



WILLY E. WARD
Director
Water Resources

B. ARNOLD GORTNER
Chief Engineer

ROBERT S. TUCKER
Chief Hydrologist

WILLIAM G. RYAN
Chief Engineer
Water Resources

ALBERT R. GOSWAMI
Chief Engineer

THE RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

1122 N. STREET, SACRAMENTO

Salinity Observations, Sacramento-San Joaquin Delta and Upper Bays
For the period June 2 to June 30, 1963, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Stations	6/2	6/6	6/10	6/14	6/18	6/22	6/26	6/30
<u>San Pablo Bay</u>								
Sobrante Beach	a5440	a9110	a10500	a12100	a11500	a10300	9920	a11700
Crockett	4750	5640	6730	e6830	9600	8710	7720	
<u>Carquinez Strait</u>								
Fenicia	3370	4750	5540	e4750	7330	6930	3370	e5540
Martinez	1930	5350	5940	e4950	6140	6530	6930	e7030
<u>Suisun Bay</u>								
West Suisun	1240	2480	4010	e2970		5440	3860	e3860
Innisfail Ferry					abd109			
Port Chicago	bd495	1810	2600	e990	3910			
Spoonbill Creek	a13			a30	ed109	a183	96	a166
Pittsburg			d19	a22	a38	a64	abd62	
<u>Sacramento River</u>								
Collinsville	a10		13	a15	a41	a14	a25	
Humaton	e8	a9	ad14	a11	a12	a17		a13
Threemile Slough Br.	a10	e8	10	a11	a12	a14	a13	a14
Rio Vista Bridge	11	9	12	12	11	11	11	11
Isleton Bridge	5	8	8	17	10	11	610	10
<u>San Joaquin River</u>								
Antioch	a16	a17	a16	19	a20		28	a31
Antioch Bridge	a25	a26	a26	a24	a23	a27	27	a33
Jersey Island	a14	a15	a15	a15	a17	a14	a15	
Threemile Slough		a12				a13	a12	a13
Culton Point	a13	12			a13	12	a15	
San Andreas Idg.	a12	a11	12	a11	a13	12		a13
Opp. Central Idg.	a7	6	11		a11	10	a10	e9
Dutch Slough		21	21	a18	a19	19	a21	a21
E.C.C. I.D.	31	16	22	a24	33	32	a36	32
Clifton Court Ferry	a15	18	19	a26	a23			a30
Montdale Bridge	a16	19	31	a22	34	12	a45	a36
Vercellis		20	30	41			48	47

a Taken after low tide.
 c Taken two days earlier.
 e Taken on a special day.
 g Station located in tidal action.

b Taken on following day.
 d Taken over one hour off scheduled time.
 f Taken two days earlier.

DEPARTMENT OF WATER RESOURCES
 ROY B. JOHNSON
 Chief Deputy Director
 ROBERT W. BRICE
 Deputy Director Policy
 NANCY GARDNER
 Deputy Director
 J. L. HARRISON
 ALVIN R. GIBBS
 Chief Engineer



DELTA DIVISION
 Sacramento, Calif.

DELTA DIVISION
 August 9, 1963

THE RESOURCES AGENCY OF CALIFORNIA
 DEPARTMENT OF WATER RESOURCES

1220 N. STREET, SACRAMENTO

Salinity Observations, Sacramento-San Joaquin Delta and Upper Bays
 For the period July 2 to July 30, 1963, inclusive.

Salinity in parts of chloride per million parts of water.
 Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
 (Ocean water contains approximately 18,200 parts)

Stations	7/2	7/6	7/10	7/14	7/18	7/22	7/26	7/30
<u>San Pablo Bay</u>								
Crockett	9180	8920	8820	e10400	11700	12200	10300	e11300
<u>Carquinez Strait</u>								
Martinez	8700	ad6450	a8370	aed6250	9510	9530	a8750	e9730
<u>Suisun Bay</u>								
Port Chicago		5900	4470	aed4490	7330	7720		a4850
Spoonbill Creek		a409	a586	e1100	a882	abd1720	1270	a1920
Pittsburg	a34	cd426		abd353		d817		acd1170
<u>Sacramento River</u>								
Collinsville	a56	a40	368	a311	a445	1090	a728	a794
Emmaton	abd20	a28	55	d20	a43	bd209	a133	a66
Threemile Slough Br.	a13	bd20	20	a18	a29	75	a30	a34
Rio Vista Bridge	12	12	8	14	18	16	16	14
Isleton Bridge	10	10	14	10	11	10	9	10
<u>San Joaquin River</u>								
Antioch	a29	a86	154		a134	660	a390	a306
Antioch Bridge	a29	a42		a44	a53		70	a121
Jersey Island	a18		40	a23	a18	a41	a52	a54
Threemile Slough	a14		16	a17		a23	a25	a136
Webb Ferry	a15	16	23	a18	a22	a30	a24	a34
San Andreas Idg.	a14	12		a11	a12	14	a12	a13
Dutch Slough	a21	22	23	a18	a24	26	a30	a57

a Taken after Low High Tide.
 c Taken two days later.
 e Taken on preceding day.

b Taken on following day.
 d Taken over one hour off scheduled time.
 f Taken two days earlier.

W. JAMES GARDNER
 Chief Hydrographer

FRANK C. BENT
 Deputy Hydrographer

MARY G. LINDA
 Hydrographer

WALTER A. GARDNER
 Hydrographer



DELTA BRANCH
 SEPTEMBER 10, 1963

THE RESOURCES AGENCY OF CALIFORNIA
 DEPARTMENT OF WATER RESOURCES

1125 N. STREET, SACRAMENTO

Salinity Observations, Sacramento-San Joaquin Delta and Upper Bays
 For the period August 2 to August 30, 1963, inclusive.

Salinity in parts of chloride per million parts of water.
 Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
 (Ocean water contains approximately 18,200 parts)

Stations	: 8/2	: 8/6	: 8/10	: 8/14	: 8/18	: 8/22	: 8/26	: 8/30
<u>San Pablo Bay</u>								
Crockett	12900	13100	12600	e12400	13200	12400	10900	e12100
<u>Carquinez Strait</u>								
Martinez	10600	e8000	11500	e8180	11400	9880	9710	e11400
<u>Suisun Bay</u>								
Port Chicago	a5640	7630	6670	e8120	8780	8530	7190	9200
Spoonhill Creek	a2450	a2640	a2350	a2500		2520	2250	a2940
Pittsburg				ad906	abd1130		a1350	
<u>Sacramento River</u>								
Collinsville	a1260				a1720	1980	a1030	a1370
Ematon	a120	287	a204	a165	a286	335	a175	a172
Threemile Slough Br.		e90	a64	a58	a134	81	e63	abd31
Rio Vista Bridge	21	38	24	37	21	42	12	15
Isleton Bridge	11	9	9	11	14	10	10	10
<u>San Joaquin River</u>								
Antioch	a494	967	736	1021	a659	1040	a426	a637
Antioch Bridge	ad168	a250	a212		a317	a249	a226	a235
Jersey Island	a101	a103				a136	a89	a32
Tareumile Slough		e56	e52	a40	a56	a51		a53
Webb Ferry		a73			a98	31	a58	a81
San Andreas Idg.	a16	a15	a16	a16		a19	a16	a22
Dutch Slough	a65	67	ad73		81	86	a73	a30

- a. Taken after Low High Tide.
- c. Taken two days later.
- e. Taken on preceding day.

- b. Taken on following day.
- d. Taken over one hour off scheduled time.
- f. Taken two days earlier.

WILLIAM E. WAYNE
 Director of
 Water Resources

EDMUND G. BROWN
 GOVERNOR OF
 CALIFORNIA

WUOD FISHER
 ADMINISTRATOR
 RESOURCES AGENCY

REPORT MADE TO
 R. G. 11-111
 December 12, 1963

N. ALBERT BORDING
 Chief Deputy Director

EDWARD G. STINE
 Deputy Director Field

NEIL C. GUYER
 Deputy Director
 Administration

ALBERT H. COOK
 Chief Engineer



DELTA BRANCH
 October 9, 1963

THE RESOURCES AGENCY OF CALIFORNIA
 DEPARTMENT OF WATER RESOURCES

1120 N. STREET, SACRAMENTO

Salinity Observations, Sacramento-San Joaquin Delta and Upper Bays
 For the period September 2 to September 30, 1963, inclusive.

Salinity in parts of chloride per million parts of water.
 Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
 (Ocean water contains approximately 18,200 parts)

Stations	: 9/2	: 9/6	: 9/10	: 9/14	: 9/18	: 9/22	: 9/26	: 9/30
<u>San Pablo Bay</u>								
Crockett	12600	12400	11300	11000	10300	9800	10700	a9900
<u>Carquinez Strait</u>								
Martinez		10900	a8240	10800	9310	a8820		
<u>Suisun Bay</u>								
Port Chicago		5490	6860	6280	5290	3330	3820	5490
Spoonbill Creek	a2350	2300	1690		882	417	a363	a735
Pittsburg					a333		a137	abd167
<u>Sacramento River</u>								
Collinsville	a1030	a1400	a515	a578	a93	172	a44	a220
Exaraton	ba332	216	a59	abd35	47	30	a22	a26
Threemile Slough Br.	ba54	58	a35	a26	a19	15	eba15	a11
Rio Vista Bridge	29	26	19	12	13	12	b7	8
Isleton Bridge	13	12	14	14	11	13	b10	8
<u>San Joaquin River</u>								
Antioch		784	a314	a250	a157	83	a39	a49
Antioch Bridge	a274	176		a83	a35	42	a33	a28
Jersey Island	a74	96	51	a46	a22	a20	a20	a25
Threemile Slough	a36	37	a20	a20		a16	a16	a15
Webb Ferry	a67	a75	a20	a35	a24		a17	
San Andreas Ldg.	a17	a18	a16	a16	16	a14	a15	a14
Dutch Slough	a72	a74	a63	a55	50	a35	a32	a29

a Taken after Low High Tide.
 c Taken two days later.
 e Taken on preceding day.

b Taken on following day.
 d Taken over one hour off scheduled time.
 f Taken two days earlier.

WILLIAM E. WARNE
Director of
Water Resources

EDWARD G. FROWN
GOVERNOR OF
CALIFORNIA

HUGO FISHER
ADMINISTRATOR
RESOURCES AGENCY

ADDRESS ONLY TO
P. O. BOX 511
Sacramento 2, Calif.

B. ARNOTT COLEMAN
Chief Deputy Director

ROBERT G. FINE
Deputy Director

JOHN GARDNER
Deputy Director

ALBERT J. COOPER
Chief Engineer



DELTA BRANCH
November 8, 1963

THE RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

1120 N. STREET, SACRAMENTO

Salinity observations, Sacramento-San Joaquin Delta and Upper Deltas
For the period October 2 to October 30, 1963, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Stations	10/2	10/6	10/10	10/14	10/18	10/22	10/26	10/30
<u>San Pablo Bay</u>								
Crockett	11200			10400	9800	9220	8040	10400
<u>Carquinez Strait</u>								
Martinez	5880	8820	a7160	7740	7840	a6280	6860	7350
<u>Suisun Bay</u>								
Port Chicago	4510	1960	6180	3950	2740	3380	2940	4020
Spoonbill Creek	a657	480	a569	407			220	419
Pittsburg	bd233		a235	169		a142	a71	116
<u>Sacramento River</u>								
Collinsville	a230	230	a76	82	a41	a25	a20	87
Emmaton	a31	28	a35	28	31	24	bd19	bd22
Threemile Slough Br.	a12	a13	a12	12	14	11	10	14
Rio Vista Bridge	11	10	b8	9	8	9	11	9
Isleton Bridge	7	6	b5	7	7	5	6	4
<u>San Joaquin River</u>								
Antioch	a110	109	a74	84	a58	a41	35	44
Antioch Bridge	a28	25	a28	20	22	28	22	22
Jersey Island			a18	17	14	14	19	
Threemile Slough	a14	16		13	14	a16	19	21
Webb Ferry	a17		ad14	16	14	18	21	
San Andreas Ldg.	a13	12	a14	16	17	a22	23	20
Dutch Slough	28	a26	a27	26	a24	a29	27	29

a Taken after Low High Tide.
c Taken two days later
Taken on preceding day

b Taken on following day.
d Taken over one hour off scheduled time.
f Taken two days earlier.

WILLIAM E. WARNE
 Director of
 Water Resources

STATE OF CALIFORNIA
 DEPARTMENT OF
 WATER RESOURCES

WATER RESOURCES
 ADMINISTRATION
 RESOURCE AGENCY

ADDRESS MAIL TO
 P. O. BOX 200
 SACRAMENTO, CALIF.



ELMER G. COBBERS
 Chief Deputy Director

FREDERICK G. PRICE
 Deputy Director Policy

WILLY G. GAVIN
 Deputy Director
 Administration

ALVIN A. BOHLE
 Chief Engineer

DELTA BRANCH
 December 9, 1963

THE RESOURCES AGENCY OF CALIFORNIA
 DEPARTMENT OF WATER RESOURCES

1120 N. STREET, SACRAMENTO

*Ward
 5-10-63*

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
 For the period November 2 to November 30, 1963, inclusive.

Salinity in parts of chloride per million parts of water.
 Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
 (Ocean water contains approximately 18,200 parts)

Stations	: 11/2	: 11/6	: 11/10	: 11/14	: 11/18	: 11/22	: 11/26	: 11/30
<u>San Pablo Bay</u>								
Crockett	11300		6760	10000	7450	4510	5930	7600
<u>Carquinez Strait</u>								
Martinez	10700	a7340	ae4410	7840	6220	a4120	6470	6130
<u>Suisun Bay</u>								
Port Chicago	5490		2160		1810	470	1470	1950
Spoonbill Creek	485	2930			108			26
Pittsburg			bd88		45	a31		
<u>Sacramento River</u>								
Collinsville	336	167	36	27	22	15		
Ematon	31	a27	bd15	14	11	a10	10	9
Threemile Slough Br.	14	a18	9	10	9	a9	6	12
Rio Vista Bridge	15	8	10	14	4	8	6	11
Isleton Bridge	6	6	7	5	6	9	7	8
<u>San Joaquin River</u>								
Antioch	118	a120	47	42	25	25	27	24
Antioch Bridge	a25	30	30	38	33	a30	35	37
Jersey Island	26							
Threemile Slough	22	a19		19	19			24
Webb Ferry	a22	a20	20		22	a23	33	26
San Andreas Idg.	20	d20	d24	20	20	31	26	26
Dutch Slough		a32	36	38	42	a48	53	60
Mossdale Bridge		a74		ed75	ad65	a52		a53

a Taken after Low High Tide.
 c Taken two days later
 e Taken on preceding day.

b Taken on following day.
 d Taken over one hour off scheduled time.
 f Taken two days earlier.

DEPARTMENT OF WATER RESOURCES

P. O. BOX 1000
SACRAMENTO



DELTA BRANCH
January 10, 1964

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the period December 2 to December 31, 1963, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Stations	: 12/2 :	12/6 :	12/10 :	12/14 :	12/18 :	12/22 :	12/26 :	12/30 :
<u>San Pablo Bay</u>								
Crockett	6860	5490	7450	7400	7500	6180	a ^c 7200	5920
<u>Carquinez Strait</u>								
Martinez	3870	4260	4070	2840	6810	4750		5930
<u>San Bay</u>								
Port Chicago		529	3240	2720		1790	4510	3530
Spoonbill Creek	45	31						
Pittsburg			28			41		59
<u>Sacramento River</u>								
Collinsville	11		14	13	a12		19	37
Ematon	10	13	13	13	13	12	15	14
Threemile Slough Br.	10	9	14	12	12	8		abd17
Rio Vista Bridge	8	8	8	7		9	8	8
Isleton Bridge	6	6	8	6	6	7	7	6
<u>San Joaquin River</u>								
Antioch	28	32	33	34	34	33	36	55
Antioch Bridge	42	38	41	46	a49	45	45	45
Jersey Island						34	30	36
Threemile Slough		d28		25	a27		23	26
Webb Ferry	28			31	a31		32	31
San Andreas Ldg.	26	28	24	31	29	30	24	d21
Dutch Slough	a57	66	61	a64	a68	63	63	a62
Mossdale Bridge	a55		d58		a65	d61		a68

- a Taken after Low High Tide.
- c Taken two days later.
- e Taken on preceding day.

- b Taken on following day.
- d Taken over one hour off scheduled time.
- f Taken two days earlier.

DEPARTMENT OF WATER RESOURCES

P.O. BOX 138
SACRAMENTO

DELTA BRANCH
February 18, 1964

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the period January 2 to January 31, 1964, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Stations	1/2	1/6	1/10	1/14	1/18	1/22	1/26	1/30
<u>San Pablo Bay</u> Crockett							5200	4610
<u>Carquinez Strait</u> Martinez	4800	7650	8430	7940	6180	3430	6030	1470
<u>Suisun Bay</u> Port Chicago	3280	3280	3870			2060		abd04
Middle Point	1400	2350	3240	3680	3040	1520	451	58
Pittsburg	72	56	52	ba74		94	38	30
<u>Sacramento River</u> Collinsville	a21	34	23	113	30	28	14	15
Emmston	abd15	15	25	bd20	a20	16	bd16	
Threemile Slough Br.	a13	14	15	16	15	12	11	15
Rio Vista Bridge	7	8	8	8	9	8	9	15
Isleton Bridge	6	7	7	9	7		8	9
<u>San Joaquin River</u> Antioch	a46	41	40	51	51	45	34	37
Antioch Bridge	48	48	46	46	48	46	51	57
Jersey Island	a34	41	37	a38	36	39	43	a40
Threemile Slough	a27	31	37		a36	38	27	
Webb Ferry	a32	a34		35		38	34	36
San Andreas Ldg.	34	29	38	37	a39		34	a34
Dutch Slough	a59	63	61	a60	a62	67	74	a79
Woodsdale Bridge	a69	70	a72	ed101			a87	a99

a Taken after Low High Tide.
c Taken two days later.
e Taken on preceding day.

b Taken on following day.
d Taken over one hour off scheduled time
f Taken two days earlier.

DEPARTMENT OF WATER RESOURCES

R. BOX 333
SACRAMENTODELTA BRANCH
MARCH 9, 1964

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the period February 2 to February 27, 1964, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Stations	2/2	2/6	2/10	2/14	2/18	2/22	2/26
<u>San Pablo Bay</u>							
Crockett	3870	6320	7400	7200	6080	8040	8820
<u>Carquinez Strait</u>							
Martinez		4460	d2110	6620	4850		
<u>Suisun Bay</u>							
Port Chicago	52	868	3580	2010	882	bd3190	2200
Middle Point	34	515	2940	1720	a181	3580	2550
Pittsburg	44	41		45	45	46	ba68
<u>Sacramento River</u>							
Collinsville	16	24	19	20	18	29	19
Emmaton	d14	15	19	22	ad17	23	20
Threemile Slough Br.	13	11	17		19	cd15	14
Rio Vista Bridge	12	9	9	14	13	9	11
Isleton Bridge	6	6	6	8	7	6	6
<u>San Joaquin River</u>							
Antioch	43	42	36	43	43	37	46
Antioch Bridge	65	63	53	52	a56	48	41
Jersey Island	a38	41	43	abd45	bd35	37	33
Threemile Slough		20	31	31		26	21
Webb Ferry		39	39	37	28		30
San Andreas Ldg.	34	18	34	29	22	23	19
Dutch Slough	83	70	76	a68	66	60	54
Mossdale Bridge	97	99	126	d137	158	a179	d193

a Taken after Low High Tide.
c Taken two days later.
e Taken on preceding day.

b Taken on following day.
d Taken over one hour off scheduled time.
f Taken two days earlier.

DEPARTMENT OF WATER RESOURCES

P.O. BOX 333
SACRAMENTO



DELTA BRANCH
April 10, 1964

1/2 hrs from low tide

Salinity observations, Sacramento-San Joaquin Delta and Upper Bay
For the period March 2 to March 31, 1964, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Stations	3/2	3/6	3/10	3/14	3/18	3/22	3/26	3/30
<u>San Pablo Bay</u>								
Crockett	8630	7650	9610	9800	10800	10000	9220	10100
<u>Carquinez Strait</u>								
Martinez	5100	6370	7450	7740	8140	ae7260	6370	a6270
<u>Suisun Bay</u>								
Port Chicago	2110	2400	4460	3630	5240	6180	2740	3920
Middle Point	1620	1370	3870	2790	4900			1720
Pittsburg	a77		bd111		a174	bd343	bd216	abd189
<u>Sacramento River</u>								
Collinsville	42	24	75		372	274	176	198
Erraton	20	24	25	29	50	bd37	33	a48
Threemile Slough Br.	14	13	13	14	14	17	17	14
Rio Vista Bridge	9	9	10	11	13	10	11	11
Isleton Bridge	8	8	7	9	10	6	7	8
<u>San Joaquin River</u>								
Antioch	50	45	49	85	131	228	113	110
Antioch Bridge	50	57	43	43	37	41	39	a36
Jersey Island	29	bd34	26	25	41	34	cd24	31
Threemile Slough	19	19					8	15
Webb Ferry		22	23	a19	25	22	17	a17
San Andreas Ldg.	11	11	14	12	12	12	12	12
Dutch Slough	33	29	39	a41	33	27	33	29
Mossdale Bridge	223	250	a220		162	a218		d191

a Taken after Low High Tide.
c Taken two days later.
e Taken on preceding day.

b Taken on following day.
d Taken over one hour off scheduled time.
f Taken two days earlier.

DEPARTMENT OF WATER RESOURCES

P. O. BOX 318
SACRAMENTODELTA BRANCH
May 8, 1964

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the period April 2 to April 30, 1964, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	4/2	4/6	4/10	4/14	4/18	4/22	4/26	4/30
<u>San Pablo Bay</u>								
Crockett	9410	7840	10300	8430	10300	10700	11400	11600
<u>Marquinez Strait</u>								
Martinez	7650	5780	8240	6360	10200	9020	9410	9410
<u>Suisun Bay</u>								
Port Chicago	3320	2500	a3770	6030	7200	bd6270	6570	6760
Middle Point	2990	1720	3480	5640		4800	5340	d5830
Pittsburg	abd74	152	a122	e255	618	a622		a672
<u>Sacramento River</u>								
Collinsville	179	34	a39	a113	613	a672	a706	1410
Ematon	38	12	a22	37	96	a122	a78	341
Threemile Slough Br.	14	9	a10	13	27	a24	28	44
Rio Vista Bridge	9	8	8	9	12	8	14	14
Isleton Bridge	a7	7	6	6	6	6	8	7
<u>San Joaquin River</u>								
Antioch	d43	61	a49	110	314	a316	a201	559
Antioch Bridge	37	34	a34	a34	37	a47	a61	81
Jersey Island	27	24	a28	34	68	a53	a40	bdg32
Threemile Slough	14	14	a13	a13	20			
Webb Ferry	16	15	a15	17	16	a22	29	
San Andreas Idg.	11	6	a9	a12	12	a12	a10	
Dutch Slough	22	26	a25	24	24	a26	32	35
Mossdale Bridge	d176	203	230	d216	bd235	203	220	

a Taken after Low High Tide.
c Taken two days later.
e Taken on preceding day.
g Taken at Low Low Tide.

b Taken on following day.
d Taken over one hour off scheduled time.
f Taken two days earlier.

DEPARTMENT OF WATER RESOURCES

P. O. BOX 570
SACRAMENTO



DELTA BRANCH
June 9, 1964

Handwritten note: 5-10-64

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the period May 2 to May 31, 1964, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts.)

Station	5/2	5/6	5/10	5/14	5/18	5/22	5/26	5/30
<u>San Pablo Bay</u>								
Crockett	10900	a10400	11800	12600	11000	11600	10700	
<u>Carquinez Strait</u>								
Martinez	9100	9300	9610	9900	a8430	9020	10200	a7840
<u>Suisun Bay</u>								
Port Chicago			6370	ed7990	abd4560	5540	6760	5200
Middle Point		5050	5740	6670		a2110	5440	3920
Pittsburg	1040	a720	a470	a529	a564	a333	a397	
<u>Sacramento River</u>								
Collinsville	1120	a539	a539	1540	a470	a211	a326	
Emmaton		a55	a55	152	a111	a34	a50	bd122
Threemile Slough Br.	45	a19	a13	34	a22	a16	30	26
Rio Vista Bridge	10	9	a12	19	b13	11	11	12
Isleton Bridge	9	10	11	10	b9	8	8	8
<u>San Joaquin River</u>								
Antioch		a265	a203	397	a260	a142	a126	212
Antioch Bridge	104	a86	a63	d89	d63	a52	a44	61
Jersey Island	102	a53		92	a53		33	
Threemile Slough			d17	ad16		a14	a14	
Webb Ferry	44		a25	36	a23	a20	25	26
San Andreas Ldg.	12	a9	a12	12	a10	a11	a11	12
Dutch Slough	33	a44	a38	34	a33	a31	23	26
Mossdale Bridge		ad191			a240	220		

a Taken after Low High Tide.
c Taken two days later.
Taken on preceding day.

b Taken on following day.
d Taken over one hour off scheduled time.
f Taken two days earlier.

DEPARTMENT OF WATER RESOURCES

P.O. BOX 918
SACRAMENTODELTA BRANCH
July 10, 1964

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the period June 2 to June 30, 1964, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	6/2	6/6	6/10	6/14	6/18	6/22	6/26	6/30
<u>San Pablo Bay</u>								
Crockett		12000	11800		e11600	10900	13400	11200
<u>Carquinez Strait</u>								
Martinez	8490	10400	10400		e7690	9330	ad9420	10300
<u>San Bay</u>								
Port Chicago	b3240	bd7170	7790	ed6370	6340	7600	9120	
Middle Point		5460	3530	5690	2400	3940		5480
Pittsburg	a356	a393	abd653	abd774	a510	a577	d2280	
<u>Sacramento River</u>								
Collinsville	a333	a394	a755	1050	a404	a510	a1560	1840
Ematon	a129	a75	a59	161	abd50			463
Threemile Slough Br.		a24	47	42	a31	a40	a85	75
Rio Vista Bridge	b14	13	17	13	13	22	24	20
Isleton Bridge	a10	9	9	a9	10	9	12	8
<u>San Joaquin River</u>								
Antioch	a192	a174	a233	567	a231	abd262	1400	991
Antioch Bridge	a65	a51	a58	86	a65	a96	ad322	a252
Jersey Island	a41	aed45	a38		a35	a41	a93	175
Threemile Slough		a17	a17	28	a22	a20		
Webb Ferry	a14	a21	ad24	19	a34			39
San Andreas Landing	9	a12	12	11	a12	a13	15	15
Dutch Slough	a28	a31	32	34	a34	a38	45	57
Mossdale Bridge	a193	bd220	a152	d162	180			

a Taken after Low High Tide.
c Taken two days later.
e Taken on preceding day.

b Taken on following day.
d Taken over one hour off scheduled time
f Taken two days earlier.

DEPARTMENT OF WATER RESOURCES

BOX 388
SACRAMENTODELTA BRANCH
August 10, 1964Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the period July 2 to July 31, 1964, inclusive.Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	: 7/2	: 7/6	: 7/10	: 7/14	: 7/18	: 7/22	: 7/26	: 7/30
<u>San Pablo Bay</u>								
Crockett	12300	a12000	13500	13200	e13800	14000	14600	13800
<u>Carguinez Strait</u>								
Martinez	a8670	10300	12200	a11700		a9250		
<u>Suisun Bay</u>								
Chicago	7400	8020	9810	8060	e9380	9980	10200	9250
Middle Point	5350	8560	8480	7040	8620	8520	9000	8170
Pittsburg	abd1400			1650	a1780		a2220	2340
<u>Sacramento River</u>								
Collinsville	a1160	a1500		a2750	a1850	a2360		a2890
Ematon	a396	a252	408	a1060	a540	a515	a679	a1030
Threemile Slough Br.	abd370	a108	a184	a280	a165	a209	a308	a191
Rio Vista Bridge	b24	37	16	66	65	57	99	16
Isleton Bridge	b10	11	13	16	17	7	12	9
<u>San Joaquin River</u>								
Antioch	710	abd588	914	a1490	a1080	a1080	2500	1910
Antioch Bridge	a262	a256	a444	559	a538	a612	892	a677
Jersey Island	a136	a134	a176	a469			a444	ad574
Threemile Slough			a166	a177	a198	a167	a191	a247
Webb Ferry	a78		225	a173	ad215	a234		a279
San Andreas Landing	a11	a15	35	a41	a34	a35	46	a36
Dutch Slough	a58	a73	119	a160	a172	a210	324	a371
Mossdale Bridge	a246	ad252	239	a273		266	a279	adb272

a Taken after Low High Tide.
 c Taken two days later.
 e Taken on preceding day.

b Taken on following day.
 d Taken over one hour off scheduled time.
 f Taken two days earlier.

DEPARTMENT OF WATER RESOURCES

P. O. BOX 333
SACRAMENTO



DELTA BRANCH
September 10, 1964

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the period August 2 to August 31, 1964, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	8/2	8/6	8/10	8/14	8/18	8/22	8/26	8/30
<u>San Pablo Bay</u>								
Crockett	e14100	14100		a14000	e14200		13200	12700 ⁹⁻²⁵ CANE IN LATE
<u>Carquinez Strait</u>								
Martinez		12900	9960	a10100	a10200	12200	11400	a9820
<u>Suisun Bay</u>								
Port Chicago	e9620	a7710	9580	10600	10000	ed10700		11200
Middle Point		d7630	8900	8750	6540	9410	7670	10100
Pittsburg	a2270		3280	a2570			bd2160	ad1960
<u>Sacramento River</u>								
Collinsville	a2250	a2570	3730	a2410		a2550		
Ermaton	a500	a765	1470	a803	a510	a946	1030	985
Threemile Slough Br.	a202	a269	459	a229	a389	a343	222	a155
Rio Vista Bridge	102	161	200	690	63	123	43	65
Isleton Bridge	12	17	8	620 b 25	8	10	10	6610
<u>San Joaquin River</u>								
Antioch	a1230	a1380	2380	2550	a1360	a1470	1180	a1420
Antioch Bridge	692	a729	875	a642	a715	892	abd539	a402
Jersey Island	a310	a400	863			a417	a446	
Threemile Slough		a206	a210	a262	a228	a216	202	
Webb Ferry				a315	a295	a309	83	
San Andreas Landing	a37	a53	47	a61	a72	47	47	a32
Dutch Slough	321	ad283	d336	ad325	a303	434	370	a291
Mossdale Bridge	317	270	318	bd277				

a Taken after Low High Tide.
c Taken two days later.
e Taken on preceding day.

b Taken on following day.
d Taken over one hour off scheduled time.
f Taken two days earlier.

DEPARTMENT OF WATER RESOURCES

P. O. BOX 212
SACRAMENTODELTA BRANCH
October 9, 1964Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the period September 2 to September 30, 1964, inclusive.Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	9/2	9/6	9/10	9/14	9/18	9/22	9/26	9/30
<u>San Pablo Bay</u>								
Crockett	e11900	13000	10800	9840	11600	11400	12700	e9990
<u>Carquinez Strait</u>								
Martinez	a6130	10700	9260	a6180	a8780	a7640	a7380	e8600
<u>Suisun Bay</u>								
Port Chicago	8440	9050	6130	4390	6910	5890	7560	e6120
Middle Point	6300	8100	5090	4580	a3080	4230	6290	
Pittsburg	a3d1290		a830	a684	a425		a687	a412
<u>Sacramento River</u>								
Collinsville		a1570	1040	a334	a392	a340	a697	
Emmaton	a256	a169	a115	a43	a48	34	a117	a36
Threemile Slough Br.	a135	91	a62		a30	a24	a29	a20
Rio Vista Bridge	26	10	18	b11	12	21	11	8
Isleton Bridge	9	9	11	b11	11	10	7	5
<u>San Joaquin River</u>								
Antioch	a809	1310	a422	a206	a213	a288	a306	a191
Antioch Bridge	a367	318	a239	bd140	a117	a69	87	a65
Jersey Island	a194	a172	a133	a74		a52	a77	
Threemile Slough	a99	a66	40	ad55	a26	a26	a23	a21
Webb Ferry								
San Andreas Landing	a35	28	a24	a21	a14	17	a17	a12
Dutch Slough	a252	a220	a151	a116	a94	73	a57	a52
Mossdale Bridge			bd213			187	ad138	

a Taken after Low High Tide.

c Taken two days later.

e Taken on preceding day.

b Taken on following day.

d Taken over one hour off scheduled time.

f Taken two days earlier.

DEPARTMENT OF WATER RESOURCES

P. O. BOX 373
SACRAMENTODELTA BRANCH
November 9, 1964

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the period October 2 to October 30, 1964, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	10/2	10/6	10/10	10/14	10/18	10/22	10/26	10/30
<u>San Pablo Bay</u>								
Crockett	10700	11400	10600	10000	11700		12400	10600
<u>Carquinez Strait</u>								
Martinez	a6850	a8330	a8690	a7820	8350			
<u>Suisun Bay</u>								
Port Chicago	6090	5440	5130	4610		7650	7530	ae5190
Middle Point	a3850	4600	5170	3920	a9340	6430	6540	
Pittsburg			418	a354	d450		823	
<u>Sacramento River</u>								
Collinsville	a309	595	a314	a442	520	2030	a726	920
Ematon	a78	60	a66	a37	84	246	218	92
Threemile Slough Br.	a23	22	a18	a21	20	103	a49	32
Rio Vista Bridge		11	10	b8	9	12	8	10
Isleton Bridge	7	5	7	b6	6	7	6	7
<u>San Joaquin River</u>								
Antioch	a183	256	259	a160	165	744	a225	
Antioch Bridge	a62	57	56	a61	50	44	74	57
Jersey Island	a37	a48	a36		36			d39
Threemile Slough	a18	18	a15	a17		20	a20	d27
Webb Ferry								
San Andreas Landing	a9	14	a14	a14	19	16	a18	11
Dutch Slough	a49	43	35	a36	35	a32	a33	33
Mossdale Bridge								

a Taken on Low High Tide.
c Taken ten days later.
e Taken on preceding day.

b Taken on following day.
d Taken over one hour off scheduled time.
f Taken two days earlier.

DEPARTMENT OF WATER RESOURCES

BOX 333
SACRAMENTO



DELTA BRANCH
December 10, 1964

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the period November 2 to November 30, 1964, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

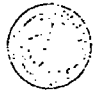
Station	11/2	11/6	11/10	11/14	11/18	11/22	11/26	11/30
<u>San Pablo Bay</u>								
Crockett	11700	10200	10200	7040	10200	8560	9700	8320
<u>Carquinez Strait</u>								
Martinez				5630	7480	8140	7100	7480
<u>Suisun Bay</u>								
Port Chicago	4890	5380	5120	a784	4510	3390	4370	4060
Middle Point				1190	3230	3920	3000	3240
Pittsburg			a413		65			a113
<u>Sacramento River</u>								
Collinsville	716	567	a600	28		a38	50	43
Emmaton	116	88	a99	bd17	22	27	33	35
Threemile Slough Br.	23	a19	a24	8	13	a18	19	20
Rio Vista Bridge	11	13	7	8	12	12	10	10
Isleton Bridge	7			6	8	9	9	6
<u>San Joaquin River</u>								
Antioch	397	268	a351	78	49	79	70	80
Antioch Bridge	43	a43	a47	40	41	a44	49	49
Jersey Island	46	a45	a36		31	a31		32
Threemile Slough	20	21	a24		27			29
Webb Ferry								
San Andreas Landing	17	27	a24	28	23	29	24	24
Dutch Slough	39	a40	a41	42	45	48	a53	a59
Mossdale Bridge								

a Taken after Low High Tide.
c Taken two days later.
e Taken on preceding day.

b Taken on following day.
d Taken over one hour off scheduled time.
f Taken two days earlier.

DEPARTMENT OF WATER RESOURCES

P. O. BOX 390
SACRAMENTO



DELTA BRANCH
January 8, 1965

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the period December 2 to December 30, 1964, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	12/2	12/6	12/10	12/14	12/18	12/22	12/26	12/30
<u>San Pablo Bay</u>								
Crockett	9720	8100	8000	9300	11700	10700	23	55 (LW)
<u>Carquinez Strait</u>								
Martinez	8300	2340	a4090	ae5200	7600	8770	27	18
<u>Suisun Bay</u>								
Port Chicago	5280	2740	ed3170	5290	6710	d6000	bd25	18
Middle Point	a2150	1130		4260	a3360	4870	8	a15
Pittsburg		113			ed319	394		
<u>Sacramento River</u>								
Collinsville	332	a24	35				4	4
Emmaton	bd45	23	24	24	50	a58	1	
Threemile Slough Br.	20	17	17	16	20	a15		
Rio Vista Bridge	8	9	10	10	9	7	1	4
Isleton Bridge	7	6	8	8	8	3	1	1
<u>San Joaquin River</u>								
Antioch	114	65	53	46	200	370	11	31
Antioch Bridge	49	a47	48	54	56	a60	40	43
Jersey Island								
Threemile Slough	29	27	a26	25		a25		6
Webb Ferry								
San Andreas Landing	25	23	24	18	22		18	16
Dutch Slough	51	67	66	68	62	a56	62	65
Mossdale Bridge								

- c Taken after Low High Tide.
Taken two days later.
- e Taken on preceding day.

- b Taken on following day.
- d Taken over one hour off scheduled time.
- f Taken two days earlier.

DEPARTMENT OF WATER RESOURCES

C. BOX 333
SACRAMENTODELTA BRANCH
February 10, 1965Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the period January 2 to January 30, 1965, inclusive.Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	1/2	1/6	1/10	1/14	1/18	1/22	1/26	1/30
<u>San Pablo Bay</u>								
Crockett	1060	74	42	2280		2080	2130	3160
<u>Carquinez Strait</u>								
Martinez		15	20	1320	1560	168	854	1830
<u>San Bay</u>								
Port Chicago		21	15	20		30	24	29
Middle Point	21	11		a21	21	26	23	18
Pittsburg	28	d24	21	fd21	d20	d23	ad24	25
<u>Sacramento River</u>								
Collinsville	9	a4	5	8	7	10	10	6
Emmaton	5	a3	4	5	10	bd9	14	9
Threemile Slough Br.		a4	3	13	6	9	6	4
Rio Vista Bridge	4	7	4	4	7	9	7	4
Isleton Bridge	3	3	2	1	2	5	4	3
<u>San Joaquin River</u>								
Antioch	26	18	20	25	20	24	32	27
Antioch Bridge	50	a50	41	34	29	28	34	47
Jersey Island						28		35
Threemile Slough		a12	6	16	14	15		18
Webb Ferry								
San Andreas Landing	8	16	4	9	12	13	5	12
Dutch Slough	44	a37	41	37	a36	42	52	60
Mossdale Bridge							30	30

a Taken after Low High Tide.
 c Taken two days later.
 e Taken on preceding day.

b Taken on following day.
 d Taken over one hour off scheduled time.
 f Taken two days earlier.

DEPARTMENT OF WATER RESOURCES

BOX 333
SACRAMENTODELTA BRANCH
March 10, 1965

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the period February 2 to February 26, 1965, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	2/2	2/6	2/10	2/14	2/18	2/22	2/26
<u>San Pablo Bay</u>							
Crockett	4060	2720	3570	5890	2790	4310	7310
<u>Carquinez Strait</u>							
Martinez	1810	1830	ae210	a194	a2060	3800	
<u>Suisun Bay</u>							
Port Chicago	27	26	485	792	38	619	d1230
Middle Point		d22	19	84	26	26	a136
Pittsburg		20	35	27		26	
<u>Sacramento River</u>							
Collinsville	7	8	9	11	a20	12	16
Emmaton	8	5	9	8	9	bd9	9
Threemile Slough Br.	6	7	6	9	9	8	12
Rio Vista Bridge	5	5	9	6	9	6	8
Isleton Bridge	3	3	4	5	4	3	4
<u>San Joaquin River</u>							
Antioch	27	27	28	22	31	27	22
Antioch Bridge	52	39	38	41	a46	39	33
Jersey Island	a30	26	32		27	32	
Threemile Slough	16		18	22	20		16
Webb Ferry							
San Andreas Landing	14	14	5	18	18	18	19
Dutch Slough	a61	58	58	54	48	50	48
Mossdale Bridge	a34		24	42			

a Taken after Low High Tide.
c Taken two days later.
e Taken on preceding day.

b Taken on following day.
d Taken over one hour off scheduled time.
f Taken two days earlier.

DEPARTMENT OF WATER RESOURCES

P. O. BOX 313
SACRAMENTODELTA BRANCH
April 9, 1965Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the period March 2 to March 31, 1965, inclusive.Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	3/2	3/6	3/10	3/14	3/18	3/22	3/26	3/31
<u>San Pablo Bay</u>								
Crockett	6250	5210	6360	7020	5670	6290	5920	716
<u>Carquinez Strait</u>								
Martinez			4440	7410	4060	4920	a4530	a492
<u>Suisun Bay</u>								
Port Chicago		a408	1280	df1580	246	1840	1880	178
Middle Point	903	a68	1010	822	236	1580	1240	a172
Pittsburg		d24	bd21	26		d26	25	bd3
<u>Sacramento River</u>								
Collinsville	14	12	16	14		25	20	1
Ematon	9	a9	13	14	14	15	15	1
Threemile Slough Br.	ad8	9	10	10	11	11	9	8
Rio Vista Bridge	9	8	8	9	8	8	8	10
Isleton Bridge	4	7	4	5	6	5	6	6
<u>San Joaquin River</u>								
Antioch	28	a26	24	23	28	26	24	23
Antioch Bridge	34	32	35	37	a46	31	31	32
Jersey Island	27	abd23	28	ad26	a26		23	ad23
Threemile Slough	22	20	21	22	a19		19	15
Webb Ferry								
San Andreas Landing	20	a20	11	20	a14	12	16	12
Dutch Slough	a46	44	43	46	48	45	46	41
Mossdale Bridge	a44		d21		34	64		a70

a Taken after Low High Tide.
 c Taken two days later.
 e Taken on preceding day.

b Taken on following day.
 d Taken over one hour off schedule time.
 f Taken two days earlier.

DEPARTMENT OF WATER RESOURCES

P. O. BOX 333
SACRAMENTO



DELTA BRANCH
May 10, 1965

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the period April 2 to April 30, 1965, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	4/2	4/6	4/10	4/14	4/18	4/22	4/26	4/30
<u>San Pablo Bay</u>								
Crockett	8430	7310	6170	3340	3610	1740	3460	4430
<u>Carquinez Strait</u>								
Martinez	a3820	a3240	3150	a2260	a574	260	a1440	544
<u>Suisun Bay</u>								
Port Chicago	1970	1720	1230	57	29			
Middle Point		955	472	22	31	19	14	a11
Pittsburg			a23	a31		22	a13	a13
<u>Sacramento River</u>								
Collinsville	a14	15	20	a22	a7	4	a5	ad10
Emmaton	a11	bd12	11	a3	bd10	9	a7	a3
Threemile Slough Br.	a9	8	8			6	a4	a6
Rio Vista Bridge	7	6	6	7	5	6	5	4
Isleton Bridge		4	8	5	4	4	6	4
<u>San Joaquin River</u>								
Antioch	a24	21	21	a25	a30		a18	a14
Antioch Bridge	a27	a35	32	a35	42	38	a24	a37
Jersey Island	ad21	19	19	abd31	a40	25	a16	a14
Threemile Slough	a14	16	17	a22			a12	a13
False River			17	a26	30	19	a15	14
San Andreas Landing	a10	16	13	a25	17	5	a5	a13
Dutch Slough	d40	36	36	d48	46	37	ad26	23
Mossdale Bridge		37		14			cd18	

a Taken after Low High Tide.
c Taken two days later
e Taken on preceding day.

b Taken on following day.
d Taken over one hour off scheduled time.
f Taken two days earlier.

DEPARTMENT OF WATER RESOURCES

P. O. BOX 378
SACRAMENTODELTA BRANCH
June 10, 1965

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the period May 2 to May 30, 1965, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	5/2	5/6	5/10	5/14	5/18	5/22	5/26	5/30
<u>San Pablo Bay</u>								
Crockett	3850	2880	5790	7170	4750	4910	6030	9050
<u>Carquinez Strait</u>								
Martinez		a632	a3390	5060	a2720	a3240		
<u>Suisun Bay</u>								
Port Chicago		a19	1220	1940	1400		2790	
Middle Point	12	17	d51	1480		45		
Pittsburg			a12			a13		
<u>Sacramento River</u>								
Collinsville	7	11		a45	a14	a9		a10
Ematon	a5	9	a11	a7	a7	a8	bd7	a9
Threemile Slough Br.	a7	7	a7	a6	d7	a7	a10	
Rio Vista Bridge	4	5	6	5	6	b8	8	9
Isleton Bridge	12	6	5	4	5	b5	6	6
<u>San Joaquin River</u>								
Antioch	14	13	a16	16	16	a12	a17	a17
Antioch Bridge	a30	33	a21	24	20	a22	a27	a27
Jersey Island	16	14		17	14	a14	a13	
Threemile Slough	a11		a16	a14		a13	a12	a12
False River	14	14	a12	12	11	a12	a12	a12
San Andreas Landing	a13	6	9	a14	12	d11	a11	a16
Dutch Slough	a23	18	a21	23	20	a27	a21	a20
Wooddale Bridge		bd31	a26		63	b40	42	69

a Taken after Low High Tide.
c Taken two days later.
e Taken on preceding day.

b Taken on following day.
d Taken over one hour off scheduled time.
f Taken two days earlier.

DEPARTMENT OF WATER RESOURCES

P. O. BOX 388
SACRAMENTO



SACRAMENTO DISTRICT
July 9, 1965

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the period June 2 to June 30, 1965, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	6/2	6/6	6/10	6/14	6/18	6/22	6/26	6/30
<u>San Pablo Bay</u>								
Crockett	7290	e7330	7220	7650	7000	d9210	9680	11300
<u>Carquinez Strait</u>								
Martinez	a5440		a3980	a3830	4810	e6950	3410	d10200
<u>Suisun Bay</u>								
Port Chicago	3400	a1040			1650	c3370		d4840
Middle Point	3160	a521	744	1610	885	c2540		6160
Pittsburg	abd44	a41	a24	.	bd31	ad35	a95	a200
<u>Sacramento River</u>								
Collinsville	74	de20	a12	26	16	a21	a18	736
Emerton	17	a12	a15		15	a14	a14	a41
Threemile Slough Br.	10	a9	a9	9	10	a10	a14	15
Rio Vista Bridge	8	9	9	8	8	9	9	10
Isleton Bridge	7	8	6	6	8	8	8	8
<u>San Joaquin River</u>								
Antioch	27	a23	a17	20	22	a25	aed29	72-
Antioch Bridge	25	a30		d30	22	a30	a28	a32
Jersey Island	18	a15	a17	16	17	a17		34
Threemile Slough		a11			15	a16	a13	a13
False River	15	a13	a13	14	14	a18	ad15	28
San Andreas Landing	12	a8	a11	14	10	a9	a14	12
Dutch Slough	d22	a18	a20	17	20	a21	a23	21
Mossdale Bridge		bd25	21	18	bd56	67	39	53

a Taken after Low High Tide.
c Taken two days later.
e Taken on preceding day.

b Taken on following day.
d Taken over one hour off scheduled time.
f Taken two days earlier.

DEPARTMENT OF WATER RESOURCES

P. O. BOX 338
SACRAMENTOSACRAMENTO DISTRICT
August 10, 1965Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the period July 2 to July 31, 1965, inclusive.Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	7/2	7/6	7/10	7/14	7/18	7/22	7/26	7/30
<u>San Pablo Bay</u>								
Crockett	9600	e10700	13000	10900	7890	e9660	12800	12800
<u>Carquinez Strait</u>								
Martinez	d8520	e9420	7930	a6780	7870	e9070	11200	9960
<u>Suisun Bay</u>								
Port Chicago	5030	e4020		5460		e6490	9710	7520
Middle Point	4460	e3360	5410	5310	4170		3510	6770
Pittsburg		a434	a331			a437	a775	
<u>Sacramento River</u>								
Collinsville	469	a272	a279	a528	765	e344	a1030	1700
Emmaton	58	a49	a29	151	d25	abc80	a74	bd276
Threemile Slough Br.	20	a15	a21	40		e17	e34	143
Rio Vista Bridge	11	9	11	9	8	10	12	26
Isleton Bridge	9	8	7	6	7	7	9	8
<u>San Joaquin River</u>								
Antioch	184	a101	a116	a221	275	a193	a310	920
Antioch Bridge	25	a29	a41	a53	63	a87	a184	a166
Jersey Island		a17	a21	82	61	a23	a46	154
Threemile Slough	14	a14	a12			ad20	a60	47
False River	23	a15	a18	25	28	d18	a37	174
San Andreas Landing	9	a9	a11	11	9	a11	a11	12
Dutch Slough	22	a20	a20	21	34	a31	a47	36
Mossdale Bridge		84	100	93	bd150	a170	160	154

a Taken after Low High Tide.
c Taken two days later.
e Taken on preceding day.

b Taken on following day.
d Taken over one hour off scheduled time.
f Taken two days earlier.

DEPARTMENT OF WATER RESOURCES

P. O. BOX 213
SACRAMENTOSACRAMENTO DISTRICT
September 10, 1965Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the period August 2 to August 31, 1965, inclusive.Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	8/2	8/6	8/10	8/14	8/18	8/22	8/26	8/30
<u>San Pablo Bay</u>								
Crockett	12700	e12800	12400	11300	10900	e11600	11600	12200
<u>Arguinez Strait</u>								
Martinez	11100	e11200	10200	10900			10400	10400
<u>Suisun Bay</u>								
Port Chicago			a5270	a5100	6780	e7560	6700	5670
Middle Point		e7050	6460	6010				
Pittsburg	a1300	a1080	a817	a845	ad644	abd431		bd498
<u>Sacramento River</u>								
Collinsville	a1250	a919	a923	1050	a520		a367	a688
Ematon	a270	a96	a110	128	120	a68	a74	a175
Threemile Slough Br.	a61		abd63	45	a24		46	a31
Rio Vista Bridge	9	22	16	20	11	14	17	9
Isleton Bridge	8	8	8	10	9	9	9	8
<u>San Joaquin River</u>								
Antioch	746	a415	a424		a308	a224	408	a307
Antioch Bridge	172	a194	ad216	163	125	a110	a108	a67
Jersey Island	a130	bd77	a94	147	a55	abd44	a44	a70
Threemile Slough	a53		a39	ad27	a25	a30	a18	a22
False River	a185	a54	a67	88	a35	a34	e37	a43
San Andreas Landing	ad12	ad10	d13	d15	ad14	ad13	a12	ad12
Dutch Slough	a53	a58	a64	68	a56	a50	44	a41
Kossdale Bridge		d164	a150	108				

a Taken after Low High Tide.
Taken two days later.
e Taken on preceding day.

b Taken on following day.
d Taken over one hour off scheduled time.
f Taken two days earlier.

DEPARTMENT OF WATER RESOURCES



P. O. BOX 288
SACRAMENTO

SACRAMENTO DISTRICT
October 8, 1965

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the period September 2 to September 30, 1965, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	9/2	9/6	9/10	9/14	9/18	9/22	9/26	9/30
<u>San Pablo Bay</u>								
Crockett	9970	11100	11100	9070	9110	10000	10100	8450
<u>Carguinez Strait</u>								
Martinez	8330	abd7540	a6660	6950	a5660		7370	5270
<u>Suisun Bay</u>								
Port Chicago								
Middle Point			d3380	2190	5120	a2240		
Pittsburg		abd331	a313		ad151	a143	184	
<u>Sacramento River</u>								
Collinsville	a223	a297	a287	a123		a103		
Emmaton	a53	a47	71	a50	a21	a25	25	28
Threemile Slough Br.	a27	a25	19	a15	a12	a15	a15	a12
Rio Vista Bridge	14	10	11	10	11	11	10	9
Isleton Bridge	b12	9	11	10	13	12	10	8
<u>San Joaquin River</u>								
Antioch	a154	a119	192	a100		93	97	
Antioch Bridge	a67	a55	a38	a43	a27	a30	30	a26
Jersey Island	abd28	abd27	43	a21	a16	a19	a21	a18
Threemile Slough		a16	a14	a14	a13	a15		
False River	a24	a23	24	a17	a15	a15	a14	a16
San Andreas Landing	a11	a12	12	a13	a12	a14	14	a16
Dutch Slough	a38	a30	32	a26	a23	a22	a23	a18
Woodsdale Bridge								

a Taken after Low High Tide
c Taken two days later.
e Taken on preceding day.

b Taken on following day.
d Taken over one hour off scheduled time.
f Taken two days earlier.

DEPARTMENT OF WATER RESOURCES
 PRODUCTION P. O. Box 9137, Sacramento District
 SACRAMENTO



SACRAMENTO DISTRICT
 November 10, 1965

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
 For the period October 2 to October 30, 1965, inclusive.

Salinity in parts of chloride per million parts of water.
 Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
 (Ocean water contains approximately 18,200 parts)

Station	10/2	10/6	10/10	10/14	10/18	10/22	10/26	10/30
<u>San Pablo Bay</u>								
Crockett	8230						9000	7220
<u>Carquinez Strait</u>								
Martinez			ed3550	7710	6680	4740	6090	5540
<u>Suisun Bay</u>								
Port Chicago	ed3230	3140	a3590	5400	2820	2760	3450	3400
Middle Point	3320	2590	2760	1130	284			d2000
Pittsburg			130	146	a139	bd62	97	a72
<u>Sacramento River</u>								
<u>Collinsville</u>								
Exxon	a26	19	26	26	a17	17	22	a22
Threemile Slough Br.	a13	12	11	a12	a11	10	14	a12
Rio Vista Bridge	b9	8	11	ad7	b7	8	7	6
Isleton Bridge	b3	7	6	7	b5	7	6	6
<u>San Joaquin River</u>								
Antioch	a42	27	50	a33	a27	35		a36
Antioch Bridge	a26	34	25	ed26	a22	26	29	a27
Jersey Island		d16	bd18	a17	a20	24	a17	a17
Threemile Slough	a14	16	13	a13		17	a16	a14
Falco River	a13	15	15	a16	a17	18	a17	a15
San Andreas Landing	a15	15	16	14	a17	12	16	a14
Dutch Slough	a21	22	a21	df24	a24	27	a29	a29
Mossdale Bridge							103	

a Taken after Low High Tide
 c Taken two days later.
 e Taken on preceding day.

b Taken on following day.
 d Taken over one hour off scheduled time.
 f Taken two days earlier.

DEPARTMENT OF WATER RESOURCES

SACRAMENTO DISTRICT
3251 S STREET
P. BOX 9157
SACRAMENTO 95816



SACRAMENTO DISTRICT
December 10, 1965

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the period November 2 to November 30, 1965, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	11/2	11/6	11/10	11/14	11/18	11/22	11/26	11/30
<u>San Pablo Bay</u>								
Crockett	7350	10200	9850	9910	9170	6870		6880
<u>Carquinez Strait</u>								
Martinez	6520	8610				a1400	2340	5220
<u>Suisun Bay</u>								
Port Chicago	2930	3930	4960	4400	3690	1850	598	1770
Middle Point	2010	3750	3800	4520	ae2840			1690
Pittsburg	a32	65		a182	74	39		a21
<u>Sacramento River</u>								
Collinsville		49	148		31	26	a13	17
Ematon	17	19	22	abd14	15	8	10	12
Threemile Slough Br.	10	9	12	a11	10	9	a10	10
Rio Vista Bridge	7	8	8	8	7	8	9	11
Isleton Bridge	6	5	6	7	6	6	7	7
<u>San Joaquin River</u>								
Antioch	30	40	59	a65	49	24	a22	22
Antioch Bridge	25	27	25	34	32	33	26	a36
Jersey Island	bd20	18	a16	abd18	18	24	abd19	26
Threemile Slough		14	14	a15		15	ad17	
False River	15	15	a15	a15	17	16	a19	31
San Andreas Landing	13	9		a14	12	17	27	24
Dutch Slough	29	31	a33	a26	39	43	a49	56
Mossdale Bridge	57			bd66		d45		

a Taken after Low High Tide
Taken two days later.
Taken on preceding day.

b Taken on following day.
d Taken over one hour off scheduled time
f Taken two days earlier.

DEPARTMENT OF WATER RESOURCES

SACRAMENTO DISTRICT
3251 S STREET
P.O. BOX 9137
SACRAMENTO 95816



SACRAMENTO DISTRICT
January 10, 1966

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the period December 2 to December 30, 1965, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	12/2	12/6	12/10	12/14	12/18	12/22	12/26	12/30
<u>San Pablo Bay</u>								
Crockett	6340	ed9370	8420	3810		6930	5840	5810
<u>Carpenter Strait</u>								
Martinez	6220				5990	5380		
<u>Suisun Bay</u>								
Port Chicago		4180		916	1770	2340	932	1840
Middle Point	2330	3590	a1520	a772	488	1840	461	1320
Pittsburg				a44	37	34	bd34	d33
<u>Sacramento River</u>								
Collinsville	17		a21	21	18	12	a18	20
Ematon	12	13	15	15	14	14	bd13	16
Threemile Slough Br.	7	12	13	12	8			8 1/2
Rio Vista Bridge	7	11	6	6	8	7	8	7
Isleton Bridge	6	6	5	5	7	6	9	6
<u>San Joaquin River</u>								
Antioch	25	35	41	44	35	32	a31	33
Antioch Bridge	17	20	26	22	23	20	18	21
Jersey Island		bd34	a36	bd34		cd29	a30	31
Threemile Slough	27	33	28	d22	d26	8		
False River	30	28	a35	27	24	a25		d28
San Andreas Landing	29	31	22	20	20	d22	27	17
Dutch Slough	59	63	a56	50	46	a45	a46	46
Mossdale Bridge								

a Taken after Low High Tide
 c Taken two days later
 e Taken on preceding day

b Taken on following day
 d Taken over one hour off schedule time
 f Taken two days earlier

DEPARTMENT OF WATER RESOURCES

SACRAMENTO DISTRICT
3251 S STREET
P.O. BOX 9127
SACRAMENTO 95816



SACRAMENTO DISTRICT
February 10, 1966

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the period January 2 to January 30, 1966, inclusive.

233.2

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	1/2	1/6	1/10	1/14	1/18	1/22	1/26	1/30
<u>San Pablo Bay</u>								
Crockett	5380	4250	2690	3210		5210	4310	6300
<u>Carquinez Strait</u>								
Martinez						4900	3260	5020
<u>Suisun Bay</u>								
Port Chicago	1670	1120	56	132	1590	1050	310	2680
Middle Point		a59	37	a30		580	33	2990
Pittsburg				35		30	a26	31
<u>Sacramento River</u>								
Collinsville	16	19	17	12	12	a12	14	10
Emmaton	12	15	a12	bd10	12	13	12	10
Threemile Slough Br.	14	16		8	12	a14	10	10
Rio Vista Bridge	9	13	ad10	10	10	7	9	6
Isleton Bridge	8	10	7	6	7	6	6	5
<u>San Joaquin River</u>								
Antioch	34	35	a40	35	28	30	35	32
Antioch Bridge	19	20	32	26	26	29	29	33
Jersey Island	29	a41	a47	42	bd33	32	bd31	
Threemile Slough		34	a27		24	23	21	29
False River	30	35	a32	23	29	29	35	32
San Andreas Landing	24	36	24	9	23	29	27	16
Dutch Slough	63	63	a68	65	66	a55	64	a64
Mossdale Bridge		a42				a80	118	

a Taken after Low High Tide
c Taken two days later
e Taken on preceding day

b Taken on following day
d Taken over one hour off
schedule time
f Taken two days earlier

DEPARTMENT OF WATER RESOURCES

SACRAMENTO DISTRICT
 3281 S STREET
 P.O. BOX 9107
 SACRAMENTO 95816



SACRAMENTO DISTRICT
 March 10, 1966

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
 For the period February 2 to February 26, 1966, inclusive.

Salinity in parts of chloride per million parts of water.
 Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
 (Ocean water contains approximately 18,200 parts)

233.2

Station	2/2	2/6	2/10	2/14	2/18	2/22	2/26
<u>San Pablo Bay</u>							
Crockett	5900	6500	4000	6330	7550	6870	
<u>Carquinez Strait</u>							
Martinez					a2030	5370	
<u>Suisun Bay</u>							
Port Chicago	2050	1190	50	1810	3240	1450	a108
Middle Point	1320	619	a33	104	617	1100	a68
Pittsburg	bd33	a36	abd41	d41	36	42	40
<u>Sacramento River</u>							
Collinsville	15	19	20		24	a24	20
Euraton	13	15	16	17	21	22	
Threemile Slough Bridge	14	15	31	13	15	19	17
Rio Vista Bridge	8	11	9	9	10	11	11
Islaton Bridge	6	10	7	5	8	9	9
<u>San Joaquin River</u>							
Antioch	36	35	40	43	36	49	46
Antioch Bridge*	23	36	41	46	45	53	53
Jersey Island	40		58	53	51	a51	52
Threemile Slough	24			41		41	29
False River	35	a239	45	bd51	44	a44	44
San Andreas Landing	29	36	30	33	36	35	28
Dutch Slough	74	76	61	75	80	83	79
Mossdale Bridge	a74	d46		bd88	a91	a96	d119

a Taken after Low High Tide

c Taken two days later

e Taken on preceding day

b Taken on following day

d Taken over one hour off
 scheduled time

f Taken two days earlier

* Chloride values computed
 from conductivity recorder

DEPARTMENT OF WATER RESOURCES

SACRAMENTO DISTRICT
 1501 S STREET
 P.O. BOX 9127
 SACRAMENTO 95816



April 8, 1966

233.2

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
 For the period March 2 to March 31, 1966, inclusive.

Salinity in parts of chloride per million parts of water.
 Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
 (Ocean water contains approximately 18,200 parts)

Station	3/2	3/6	3/10	3/14	3/18	3/22	3/26	3/31
<u>San Pablo Bay</u>								
Crockett	7360	8490	8020		6730		7800	576
<u>Carquinez Strait</u>								
Martinez					a3820	a3550	5270	420
<u>Suisun Bay</u>								
Port Chicago	3250	3140	1670	1730	2030	317	248	15
Middle Point	1920	2050	a422	a197	908	101	1290	
Pittsburg		39			28		23	2
<u>Sacramento River</u>								
Collinsville		28		21	14	12	13	1
Ematon	22	22	21	20	15	8	11	1
Threemile Slough Bridge	16	17	16	13	8	9	8	1
Rio Vista Bridge	8	12	16	9	8	a9	6	
Isleton Bridge	6	10	6	6	4	6	5	
<u>San Joaquin River</u>								
Antioch	ed39	39	44	35	30	30	23	19
Antioch Bridge	56	54	48	43	33	32	26	25
Jersey Island	44	52	35	34	bd30	a38	28	bd29
Threemile Slough	32	25	24	23	15		17	17
False River	38	35	32	29	25	22	23	20
San Andreas Landing	8	22	16	7	15	15	13	8
Dutch Slough	55	72	69	70	65	a43		
Mossdale Bridge	all8		122		a61	a196	201	34

a Taken after Low High Tide

c Taken two days later

e Taken on preceding day

b Taken on following day

d Taken over one hour off scheduled time

f Taken two days earlier

* Chloride values computed from conductivity recorder readings

DEPARTMENT OF WATER RESOURCES

SACRAMENTO DISTRICT
3251 S STREET
P.O. BOX 9187
SACRAMENTO 95816



May 10, 1966

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the period April 2 to April 30, 1966, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	4/2	4/6	4/10	4/14	4/18	4/22	4/26	4/30
<u>San Pablo Bay</u>								
Crockett	8510	8360		5570	10400	8490	8720	9420
<u>Carguinez Strait</u>								
Martinez	a4950	5150	2900	d1630		6570	5550	
<u>Suisun Bay</u>								
Port Chicago	1760	2150		468	4360	3680	4320	ed3820
Middle Point	1670	1050	1050	261	3430	2610	2400	
Pittsburg	23	abd26	29	20	a48	a46	bd153	
<u>Sacramento River</u>								
Collinsville	14			13	a17	a15	83	a49
Ematon		14	13	8	a9	13	d24	a23
Threemile Slough Bridge	9	a6	7	7	a8	a11	10	a8
Rio Vista Bridge	7	5	6	5	5	5	11	6
Isleton Bridge	6	5	5	4	5	5	5	4
<u>San Joaquin River</u>								
Antioch	20	a24	21	18	a21	a26	57	a75
Antioch Bridge*	23	23	20	19	16	18	22	28
Jersey Island		bd23	24	15	abd11	a14	24	
Threemile Slough				11	a9	a8		
False River	21	21	ed17	13	aed13	12	d14	a11
San Andreas Landing	12	12	6	5	a7	a8	10	
Dutch Slough	36	27	d23	28	a26	22	13	a17
Mossdale Bridge								

a Taken after Low High Tide
c Taken two days later
e Taken on preceding day

b Taken on following day
d Taken over one hour off scheduled time
f Taken two days earlier
* Chloride values computed from conductivity recorder readings

DEPARTMENT OF WATER RESOURCES

SACRAMENTO DISTRICT
3251 S STREET
P.O. BOX 9137
SACRAMENTO 95816



June 10, 1966

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the period May 2 to May 30, 1966, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	5/2	5/6	5/10	5/14	5/18	5/22	5/26	5/30
<u>San Pablo Bay</u>								
Crockett	10000	11400		9340	9180	11400	9630	
<u>Carquinez Strait</u>								
Martinez		a5420			7210		ae4330	8530
<u>Suisun Bay</u>								
Port Chicago	4030	5560	5170	5330	4650	6090	4950	4660
Middle Point		4710		a1650		a2320	3150	4170
Pittsburg	a170	a320	382	a217	a126			a348
<u>Sacramento River</u>								
Collinsville	a65	437	490	a103	a39	485	258	a202
Emmaton	a32	a59	85		a28	69	110	a63
Threemile Slough Bridge	a10	35	18	a13	a12	23	55	a26
Rio Vista Bridge	6	10	9	9	8	9	9	10
Isleton Bridge	8	8	7	7	7	8	8	10
<u>San Joaquin River</u>								
Antioch	a73	a97	223	a88	a53	181	180	a112
Antioch Bridge*	36	102	90	56	39	73	87	117
Jersey Island			45	a15	28	a19	45	a22
Threemile Slough	a8	a9	17		a11		16	a20
False River	bd15	24	15	a12	a23	14	16	a18
San Andreas Landing	a8	a7	9	a8	a8	7	8	a10
Dutch Slough	a17	ad19	17	a18	d18	17	20	a19
Mossdale Bridge	195							

a Taken after Low High Tide
c Taken two days later
e Taken on preceding day

b Taken on following day
d Taken over one hour off scheduled time
f Taken two days earlier
* Chloride values computed from conductivity recorder readings

DEPARTMENT OF WATER RESOURCES

SACRAMENTO DISTRICT
3251 S STREET
P.O. BOX 9137
SACRAMENTO 95816



July 8, 1966

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the period June 2 to June 30, 1966, inclusive.

233.2

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	6/2	6/6	6/10	6/14	6/18	6/22	6/26	6/30
<u>San Pablo Bay</u>								
Crockett	11100	a10300	e11600	10500	13200	13700	e12000	1360
<u>Carquinez Strait</u>								
Martinez	a5670		a8370	10500	11900		a2350	
<u>Suisun Bay</u>								
Port Chicago	6550	6870	e5490	8300	9830	9400	e8120	1070
Middle Point		5960	e4760	6850	6220		a5920	
Pittsburg	a511	a581	a810	abd1150	a1370		a2170	
<u>Sacramento River</u>								
Collinsville	a467	1260	a889	a703		2940		a198
Emmaton	a81	d234	d292	a180	a347	1110	abd699	a84
Threemile Slough Bridge	a41		a49	a47	a290	651	a220	a34
Rio Vista Bridge	17	16	18	22	50	63	71	11
Isleton Bridge	10	12	12	d12	22	16	18	1
<u>San Joaquin River</u>								
Antioch	a173	628	a487	a356	a837	2510	a1250	a137
Antioch Bridge*	a147	270	272	342	830	1025	1065	167
Jersey Island	70	121	a71	a87	bd570	553	520	a25
Threemile Slough		36	a45	a46	a70	d244		a22
False River	a36	90	a38	ad45	bd386	344	a195	d59
San Andreas Landing	a11	11	a12	a14	a21	16	a17	a3
Dutch Slough	20	24	a32	a42	83	112	a142	a16
Mossdale Bridge		218	d208	226	255	249	a223	221

a Taken after Low High Tide
c Taken two days later
e Taken on preceding day

b Taken on following day
d Taken over one hour off scheduled time
f Taken two days earlier
* Chloride values computed from
conductivity recorder readings

DEPARTMENT OF WATER RESOURCES

SACRAMENTO DISTRICT
3031 S STREET
P.O. BOX 9127
SACRAMENTO 95816



August 10, 1966

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the period July 2 to July 30, 1966, inclusive.

233.2

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	7/2	7/6	7/10	7/14	7/18	7/22	7/26	7/30
<u>San Pablo Bay</u>								
Crockett	14200		e12300	e12500	14800	13700	e14300	15100
<u>Carquinez Strait</u>								
Martinez								
<u>Suisun Bay</u>								
Port Chicago	9750	8540	e7430	10400	a7770	8460	e9210	9230
Middle Point				2620	9450		e6570	9750
Pittsburg	a2030			a2280		a2880	ad2530	a2360
<u>Sacramento River</u>								
Collinsville	a1990	3170	a2200		a2630	a3240	a2220	
Emmaton	a850	a1090	a577	a754	a834	a1060	a671	a1090
Threemile Slough Bridge	a334	518	a245	a388	570	a336	a405	a360
Rio Vista Bridge	113	150	72	81	153	124	123	190
Isleton Bridge	22	9	9	8	10	8	13	1
<u>San Joaquin River</u>								
Antioch	2920	2220	a1460	a1620	2930	a2160	a1310	a1820
Antioch Bridge*	1400	1220	1325	1400	1525	1325	1530	1470
Jersey Island	1200	850	abd289	a373	a444	a300	938	a510
Threemile Slough	a133	ad174		a252			a244	a260
False River	597	593	a276	a332	892	ad434	a349	a420
San Andreas Landing	a32	143	a53	61	a56	a60	a42	a60
Dutch Slough	218	272	a282	a353	391	a356	a338	a330
Mossdale Bridge	230	211		255	242	a239	284	260

a Taken after Low High Tide
c Taken two days later
e Taken on preceding day

b Taken on following day
d Taken over one hour off scheduled time
f Taken two days earlier
* Chloride values computed from conductivity recorder readings

DEPARTMENT OF WATER RESOURCES

SACRAMENTO DISTRICT
3351 S STREET
P.O. BOX 9137
SACRAMENTO 95816



September 9, 1966

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
for the period August 2 to August 30, 1966, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1½ hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	8/2	8/6	8/10	8/14	8/18	8/22	8/26	8/30
<u>San Pablo Bay</u>								
Crockett		14000	e13700	15300	14100	13300	e13200	
<u>Carquinez Strait</u>								
Martinez					12000			
<u>Suisun Bay</u>								
Port Chicago	9700		a7450		9200	8700	9250	8950
Middle Point	d8380	7180	e9430	10100	d7800	7350		7050
Pittsburg	a2240	a2550	ad2600	a2190	a1870		a1740	1910
<u>Sacramento River</u>								
Collinsville	3900	a2510	a2300		2860	a1930	a1760	
Ematon	1370	a 357	e 940	a 527	648	abd230	a 361	
Threemile Slough Bridge	492	a 218	a 185	a 331	236	a 176	a 123	a153
Rio Vista Bridge	29	63	88	105	83	75	23	32
Isleton Bridge	9	9	bd 9	8	9	8	12	6
<u>San Joaquin River</u>								
Antioch	2380	a1610	a1330	a1200	1870	a844	a756	a955
Antioch Bridge*	1270	1090	1480	1260	980	1020	750	720
Jersey Island	1130	a525						
Threemile Slough	a220			ad120	a150		a84	a102
False River	745	a314	ad270	a318	475	a183	a207	256
San Andreas Landing	100	56	a56	a66	d61	a37	a35	a40
Dutch Slough	377	a372	a370	a420	376	a278	a242	d204
Wooddale Bridge	214	a265	a264	272	261	a273	240	225

a Taken after Low High Tide
c Taken two days later
e Taken on preceding day

b Taken on following day
d Taken over one hour off scheduled time
f Taken two days earlier
* Chloride values computed from conductivity recorder readings

DEPARTMENT OF WATER RESOURCES

SACRAMENTO DISTRICT
 2021 S STREET
 P.O. BOX 9137
 SACRAMENTO 95816



October 10, 1966

233.2

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
 for the period September 2 to September 30, 1966, inclusive.

Salinity in parts of chloride per million parts of water.
 Samples taken 1½ hours after High High Tide unless otherwise denoted.
 (Ocean water contains approximately 18,200 parts)

Station	9/2	9/6	9/10	9/14	9/18	9/22	9/25	9/30
<u>San Pablo Bay</u>								
Crockett	12600	13700	e12100	12100	12900	e10900	10900	14200
<u>Carquinez Strait</u>								
Martinez					bd6760	e9400	7760	a9570
<u>Suisun Bay</u>								
Port Chicago	7100	8300		7180	7320	e6500	6670	7240
Middle Point	6380	6700	e5410					
Pittsburg	a1300	bd1280	a860	a942	a845	a1180		1180
<u>Sacramento River</u>								
Collinsville	1580	a1190		a688	a755	a833	a724	a952
Emmaton	440	a350	a112	abd111	143	a116	ad130	196
Threemile Slough Bridge	114	a67	a65	a57	a60	a47	a41	46
Rio Vista Bridge	51	12	20	35	33	23	18	18
Isleton Bridge	11	12	16	15		10	8	9
<u>San Joaquin River</u>								
Antioch	898	a560	a605	652	a469	a287	a255	598
Antioch Bridge*	420	580	400	300	270	280	225	255
Jersey Island							a58	118
Threemile Slough	a77	a60	a45	a34		a28		28
False River	181	a116	a101	106	a70	a57	a49	a65
San Andreas Landing	a23	28	a24	25	23	a20	a17	d15
Dutch Slough	197	136	ad132	108	a87	a70	a64	a59
Mossdale Bridge	229	a220	a214	228	a226	a206		a204

a Taken after Low High Tide
 c Taken two days later
 e Taken on preceding day

b Taken on following day
 d Taken over one hour off scheduled time
 f Taken two days earlier
 * Chloride values computed from
 conductivity recorder readings

DEPARTMENT OF WATER RESOURCES



SACRAMENTO DISTRICT
3251 S STREET
P.O. BOX 9137
SACRAMENTO 95816

November 10, 1966

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
for the period October 2 to October 31, 1966, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1½ hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	10/2	10/6	10/10	10/14	10/18	10/22	10/26	10/30
<u>San Pablo Bay</u>								
Crockett	13900	11500	e11000	11400	11600	10800	12600	11300
<u>Carguinez Strait</u>								
Martinez	a9090	a8780		a6660	11000	ae8600	8700	8870
<u>Suisun Bay</u>								
Port Chicago	7260	5480	ed5500	5240	6700	6010	7190	6010
Middle Point	6160							
Pittsburg	952		a670	611	abd1070	630	2120	918
<u>Sacramento River</u>								
Collinsville	a933	a724	a805	831	a672	774	1440	840
Emmaton	a229	a105	a132	123	a177	86		bd275
Threemile Slough Bridge	a31	a52	a41	a33	a40	50	a36	a34
Rio Vista Bridge	16	a10	13	9	16	11	10	12
Isleton Bridge	8	7	8	8	7	6	6	6
<u>San Joaquin River</u>								
Antioch	564	654	a314	510	a369	305	481	473
Antioch Bridge*	240	285	182	182	215	208	270	350
Jersey Island	97	a50	a41	44	66	45	82	61
Threemile Slough	22	a18		19	d25	15		21
False River	abd47	a35	a35	a33	a31	36	41	d28
San Andreas Landing	16	a15	a15	14	15	14	13	13
Dutch Slough	a103	a45	a44	a45	a42	39	34	a36
Moscdale Bridge	a109	a166	176	a116	a119	116	a141	a137

a Taken after Low High Tide
c Taken two days later
e Taken on preceding day

b Taken on following day
d Taken over one hour off scheduled time
f Taken two days earlier
* Chloride values computed from
conductivity recorder readings

DEPARTMENT OF WATER RESOURCES

SACRAMENTO DISTRICT
 1 S STREET
 SACRAMENTO 95817
 SACRAMENTO 95316



December 9, 1966

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
 for the period November 2 to November 30, 1966, inclusive

Salinity in parts of chloride per million parts of water.
 Samples taken 1½ hours after High High Tide unless otherwise denoted.
 (Ocean water contains approximately 18,200 parts)

Station	11/2	11/6	11/10	11/14	11/18	11/22	11/26	11/30
<u>San Pablo Bay</u>								
Crockett	11600	11600	11800	12100	7630	8070		7620
<u>Carquinez Strait</u>								
Martinez	a8130	7610	a7040		6110	a3530		a 916
<u>Suisun Bay</u>								
Port Chicago	7840	5000	4780	7450	3120		2190	
Middle Point	6420		5490				1410	126
Pittsburg	bd1350	a808		586		171		36
<u>Sacramento River</u>								
Collinsville	a836	a823	681	1220	a230	39	24	21
Emmaton	293	a239	115	123	a60	19	10	a12
Threemile Slough Bridge	a57	a50	27	bd33	a16	11	9	a10
Rio Vista Bridge	bd7	9	11	14	7	7	9	9
Isleton Bridge	7	6	7	7	8	6		13
<u>San Joaquin River</u>								
Antioch	a250	a471	311	436	a135	91	31	a25
Antioch Bridge*	520	290	187	280	73	39		
Jersey Island	144	a48	36	52	25	bd23	23	24
Threemile Slough	a22		15	a19		d13	15	a15
False River	a26	a43	d24	a21	a18	d16	17	17
San Andreas Landing	14	a12	13	14	14	12	14	16
Dutch Slough	a33	a32	33	a36	a30	32	34	a39
Mossdale Bridge	a173	a118	a116	a117	a124	159	a163	a181

a Taken after Low High Tide
 c Taken two days later
 e Taken on preceding day

b Taken on following day
 d Taken over one hour off scheduled time
 f Taken two days earlier
 * Chloride values computed from
 conductivity recorder readings

DEPARTMENT OF WATER RESOURCES

SACRAMENTO DISTRICT
3251 S STREET
P.O. BOX 9137
SACRAMENTO 95816



January 10, 1967

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
for the period December 2 to December 30, 1966, inclusive

Salinity in parts of chloride per million parts of water.
Samples taken 1½ hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	12/2	12/6	12/10	12/14	12/18	12/22	12/26	12/30
<u>San Pablo Bay</u>								
Crockett	6920	3800	1880	2230	4310	6870	7070	6180
<u>Carquinez Strait</u>								
Martinez	a2350	d2670	bd2310			6090	3580	3860
<u>Suisun Bay</u>								
Port Chicago	3050	53		34		2350		1320
Middle Point		ae31			23		844	127
Pittsburg	37	20	32	24	35		40	37
<u>Sacramento River</u>								
Collinsville	a14	8	12	a10	12	11	16	12
Emmaton	a10	8	bd10	a7	9	d10	12	12
Threemile Slough Bridge	a9	11	7	a10	10	11		
Rio Vista Bridge	6	6	5	7	8	28	6	6
Isleton Bridge	3	5	5	5	5	8	8	5
<u>San Joaquin River</u>								
Antioch	a25	22	19	a28	36	40	38	a41
Antioch Bridge*	21	19	17	25	36	45	38	37
Jersey Island	23	27	25	a31	50	d42	45	bd35
Threemile Slough	a16	14	18	a25	32	21	30	a29
False River	a17	16	18	43		d36	33	a33
San Andreas Landing	15	11	21	30	31	21	27	29
Dutch Slough	a34	43	a46	a68	89	81	a75	a65
Mossdale Bridge	a124	108	a26	a43	51	d48	d54	

a Taken after Low High Tide
c Taken two days later
e Taken on preceding day

b Taken on following day
d Taken over one hour off scheduled time
f Taken two days earlier
* Chloride values computed from
conductivity recorder readings

DEPARTMENT OF WATER RESOURCES

SACRAMENTO DISTRICT
325. J STREET
P.O. BOX 9137
SACRAMENTO 95816

Note: Jan 1967

February 10, 1967

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the Period January 2 to January 30, 1967, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	1/2	1/6	1/10	1/14	1/18	1/22	1/26	1/30
<u>San Pablo Bay</u>								
Crockett	5020	5520	7380	6830	6650	7240		42
<u>Carcunez Strait</u>								
Martinez	4450	6350	a3520	a4340	6840	a4940	a55	41
<u>Suisun Bay</u>								
Port Chicago	511	1990		1640	2560	4950	69	a42
Middle Point	106	797	142			3560	51	35
Pittsburg		bd39	51	bd57	387		51	41
<u>Sacramento River</u>								
Collinsville	21	16	19	a18	20	340	15	10
Emmaton	bd13	14	17	a19	14	d15	16	1
Threemile Slough Bridge		12	a12	a13	12	13	6	8
Rio Vista Bridge	7	9	11	11	10	10		10
Isleton Bridge	6	6	9	9	8	9	4	5
<u>San Joaquin River</u>								
Antioch	38	36	39	a46	43	165	35	41
Antioch Bridge*	38	40	40	47	47	54	52	35
Jersey Island	34	39	37	a33	37	38	44	35
Threemile Slough	28	29	26	a24	30	31		18
False River	d34	d34	a32	29	32	32	36	37
San Andreas Landing	29	29	33	a35	30	26	22	a21
Dutch Slough	67	61	a61	a61	57	47	a65	100
Mossdale Bridge	106	87	a111	a134	143	a135	a32	39

a Taken after Low High Tide
c Taken two days later
e Taken on preceding day

b Taken on following day
d Taken over one hour off scheduled time
f Taken two days earlier
* Chloride values computed from conductivity recorder readings

DEPARTMENT OF WATER RESOURCES

SACRAMENTO DISTRICT
3251 S STREET
P.O. BOX 9137
SACRAMENTO 95816



March 10, 1967

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the Period February 2 to February 26, 1967, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	2/2	2/6	2/10	2/14	2/18	2/22	2/26
<u>San Pablo Bay</u>							
Crockett	174	1490	2590		4150	6470	4810
<u>Carquinez Strait</u>							
Martinez	29		a37	1160	2130		a1490
<u>Suisun Bay</u>							
Port Chicago	26	18		30	352	1760	300
Middle Point	28				ac28	1270	98
Pittsburg	21	31			38		36
<u>Sacramento River</u>							
✓Collinsville	6	d7	a10	21	15	14	17
Ematon	4	d7	18	10	10	bd12	12
✓Threemile Slough Bridge	3	5	7	8	9	12	11
✓Rio Vista Bridge	5	7	6	7	8	9	10
✓Isleton Bridge	4	3	5	5	6	5	6
<u>San Joaquin River</u>							
✓Antioch	40	33	38	41	34	33	40
✓Antioch Bridge*	24	24	36	39	49	44	44
Jersey Island	34	36	42	24	42	42	36
✓Threemile Slough	20	22	30	25	27	29	d28
False River	38	37	a40	a28	34	36	a34
San Andreas Landing	6	18	17	a17	24	23	25
Dutch Slough	95	97	a94	86	72	77	74
✓Mossdale Bridge	21	a32	a24	50	52	a54	a65

a Taken after Low High Tide
c Taken two days later
e Taken on preceding day

b Taken on following day
d Taken over one hour off scheduled time
f Taken two days earlier
* Chloride values computed from
conductivity recorder readings

DEPARTMENT OF WATER RESOURCES

SACRAMENTO DISTRICT
 325 STREET
 P.O. BOX 9137
 SACRAMENTO 95816



April 10, 1967

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
 For the period March 2 to March 30, 1967, inclusive.

Salinity in parts of chloride per million parts of water.
 Samples taken 1½ hours after High High Tide unless otherwise denoted.
 (Ocean water contains approximately 18,200 parts)

Station	3/2	3/6	3/10	3/14	3/18	3/22	3/26	3/30
<u>San Pablo Bay</u>								
Crockett	5270	6180	7100	5650	2950	2920	2210	2470
<u>Carquinez Strait</u>								
Martinez	2070	a3080	5370		350	676		
<u>Suisun Bay</u>								
Port Chicago	1120	990	2630	660	41		37	30
Middle Point	e51			118	29		32	acd23
Pittsburg	bd32		bd36	a36	35	26	a38	26
<u>Sacramento River</u>								
Collinsville	13	18	24	20	18	11	a9	12
Emmaton	14	15	17	bd14	14	21	bd12	9
Threemile Slough Br.	12	13	14	12	8	8	a10	8
Rio Vista Bridge	10	12	11	8	6	5	5	8
Isleton Bridge	6	7	8	8	ab4	4	4	5
<u>San Joaquin River</u>								
Antioch	33	32	36	a38	36	38	a44	36
Antioch Bridge*	56	58	62	62	51	48	47	
Jersey Island	40	37	35	38	42	44	a35	28
Threemile Slough	31	33	29		28	25	a21	13
False River	33	bd34	34	28	32	36	d34	26
San Andreas Landing	d23	28	26	a26	d20	19	a17	16
Dutch Slough	70	68	a61	65	69	100	a70	51
Moadale Bridge	70	a105	a106	110	22	a18	36	49

a Taken after Low High Tide
 c Taken two days later
 e Taken on preceding day

b Taken on following day
 d Taken over one hour off scheduled time
 f Taken two days earlier
 * Chloride values computed from conductivity recorder readings

DEPARTMENT OF WATER RESOURCES

SACRAMENTO DISTRICT
3231 S STREET
P.O. BOX 9137
SACRAMENTO 95316



May 10, 1957

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the Period April 2 to April 30, 1957, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	4/2	4/6	4/10	4/14	4/18	4/22	4/26	4/30
<u>San Pablo Bay</u>								
Crockett	2800	4280	2900	1340	3000	3380	1770	642
<u>Carquinez Strait</u>								
Martinez	ae32	2210	a915	ae1730	a1100	ad343	42	
<u>Suisun Bay</u>								
Port Chicago	27	73	26	28		29	39	ae15
Middle Point	ae23	27	a18		21	27	a20	19
Pittsburg	25		abd25			a26	a25	20
<u>Sacramento River</u>								
Collinsville	16	12	a8	14	10	a12	12	8
Examton		9	9	9	8	a8	4	10
Threemile Slough Bridge	10	8	7	8	8	af8	8	7
Rio Vista Bridge	5		6	7	5	8	5	6
Isleton Bridge	6	5	4	4	6	4	5	a5
<u>San Joaquin River</u>								
Antioch	24	25	a27	29	27	a24		17
Antioch Bridge*		29	32	26	32	26	23	19
Jersey Island	23	23	abd28	27		a26	22	ae20
Threemile Slough		19	a22				a12	
False River	20	20	23	23	d19	a16	15	16
San Andreas Landing	16	16	a22	17	5	a11	12	11
Dutch Slough	53	45	46	49	37	a36	32	23
Mossdale Bridge	23	a30	12	17	a23	11	13	14

a Taken after Low High Tide
c Taken two days later
e Taken on preceding day

b Taken on following day
d Taken over one hour off scheduled time
f Taken two days earlier
* Chloride values computed from conductivity recorder readings

DEPARTMENT OF WATER RESOURCES



SACRAMENTO DISTRICT
 3751 S STREET
 P.O. BOX 9137
 SACRAMENTO 95816

June 9, 1967

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
 For the Period May 2 to May 30, 1967, inclusive.

Salinity in parts of chloride per million parts of water.
 Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
 (Ocean water contains approximately 18,200 parts)

Station	: 5/2 :	: 5/6 :	: 5/10 :	: 5/14 :	: 5/18 :	: 5/22 :	: 5/26 :	: 5/30
<u>San Pablo Bay</u>								
Crockett	1270	3370	3040	1780	a1400	4000	3130	e2030
<u>Carquinez Strait</u>								
Martinez			a154	228	a340	2800	a84	e954
<u>Suisun Bay</u>								
Port Chicago	26		30	18	100	23	22	e16
Middle Point	d17		15	15		a12	13	e12
Pittsburg	a22	19		19		a17		
<u>Sacramento River</u>								
Collinsville		10	a9	11	a9	a8	8	
Emmaton	a9	10	9	7	a8	ad6	5	a7
Threemile Slough Bridge	a7	10	8	bd6	a11	a6	6	a12
Rio Vista Bridge	6	6	9	6	9	6	4	5
Isleton Bridge	5	6	3	4	6	4	3	5
<u>San Joaquin River</u>								
Antioch	a19	19	a16	16	a19	a14	13	a16
Antioch Bridge*	19	23	19	15	18	16	14	10
Jersey Island	a14	17	16	17	a15	a13	13	a13
Threemile Slough	a13	14			a13	a10	8	a12
False River	a16	15	15	15	ad13	13	d13	a13
San Andreas Landing	a7	12	14	5	a6	a12	a12	a3
Dutch Slough	a23	24	24	24	a23	21	23	a20
Mossdale Bridge	17	16	16	15	15	15	11	12

a Taken after Low High Tide
 c Taken two days later
 e Taken on preceding day

b Taken on following day
 d Taken over one hour off scheduled time
 f Taken two days earlier

* Chloride values computed from
 conductivity recorder readings

DEPARTMENT OF WATER RESOURCES

SACRAMENTO DISTRICT
2251 S STREET
P.O. BOX 9127
SACRAMENTO 95816



July 10, 1967

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the Period June 2 to June 30, 1967, inclusive

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	6/2	6/6	6/10	6/14	6/18	6/22	6/26	6/30
<u>San Pablo Bay</u>								
Crockett	3060	2850						
<u>Carquinez Strait</u>								
Martinez	a850	a280	1020	abd719	a70	a373	a1060	a335
<u>Suisun Bay</u>								
Port Chicago	526	16	17	18		310	17	e1140
Middle Point				12	15		14	
Pittsburg	a16	a16	a15		a13	abd14	bd13	a18
<u>Sacramento River</u>								
Collinsville	a9	a10	10	a11	a8	a18	8	a8
Emmaton	a5	a7	8	abd8		8	8	a6
Threemile Slough Bridge	a12	a8	7	a7	a7	6	7	a3
Rio Vista Bridge	4	5	4	b8	7	6	4	6
Isleton Bridge	4	5	5	b5	5	4	5	5
<u>San Joaquin River</u>								
Antioch	a15	a13	12	a16	a17	a13	13	a18
Antioch Bridge*	13	11	12	b12	12	11	11	e12
Jersey Island	a13	12	12	a14	abd18	12	14	a13
Threemile Slough	a10	a10	a10		a12	a11	10	
False River	a12	d12	11	a12	a12	12	12	ad15
San Andreas Landing	a6	a11	10	a11	a11	a13	12	a6
Dutch Slough	a16	a18	18	a18	a17	16	17	
Mossdale Bridge	10	13	12	b12	15	13	11	11

a Taken after Low High Tide
c Taken two days later
e Taken on preceding day

b Taken on following day
d Taken over one hour off scheduled time
f Taken two days earlier
* Chloride values computed from conductivity recorder readings

DEPARTMENT OF WATER RESOURCES

SACRAMENTO DISTRICT
3251 S STREET
P.O. BOX 9137
SACRAMENTO 95816



August 10, 1967

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the Period July 2 to July 30, 1967, inclusive

Salinity in parts of chloride per million parts of water
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	7/2	7/6	7/10	7/14	7/18	7/22	7/26	7/30
<u>San Pablo Bay</u>								
Crockett							6750	e7800
<u>Carquinez Strait</u>								
Martinez	a342	3440	2570	a1220	5470	6130	ad4760	e4060
<u>Suisun Bay</u>								
Port Chicago	694	337	a40	e763	a422	2340	1730	e3340
Middle Point		27	57		2870			
Pittsburg	ad16				abd21	a28	abd35	a106
<u>Sacramento River</u>								
Collinsville	a9	a7	12	a10	a13	d22	a22	a17
Emmerton	a8	a10	11	a10	a11	14	a15	a13
Threemile Slough Bridge	a11	a7	d9	a3	a9	10	a10	a10
Rio Vista Bridge	5	6	7	e8	7	9	8	8
Isleton Bridge	5	5	6	6	5	8	7	6
<u>San Joaquin River</u>								
Antioch	a16	14	14	a15	a16	22	a23	a23
Antioch Bridge*	11	11	9	e10	14	17	17	24
Jersey Island	a16	a14	13	a15	a12	16	a13	a13
Threemile Slough	a11	a11	ad11			a12	a12	a11
False River	a13	a12	12	a12	d12	12	ad12	a12
San Andreas Landing	a12	a12	11	a9	a11	12	ad12	a11
Dutch Slough	a17	18	17	a17	a15	16	a17	a17
Mossdale Bridge	10	11	15	a24	27	50	a66	a94

a Taken after Low High Tide
c Taken two days later
e Taken on preceding day

b Taken on following day
d Taken over one hour off scheduled time
f Taken two days earlier
* Chloride values computed from conductivity recorder readings

DEPARTMENT OF WATER RESOURCES

SACRAMENTO DISTRICT
2251 S STREET
P.O. BOX 9137
SACRAMENTO 95816



September 8, 1967

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the Period August 2 to August 30, 1967, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	: 8/2	: 8/6	: 8/10	: 8/14	: 8/18	: 8/22	: 8/26	: 8/30
<u>San Pablo Bay</u>								
Crockett		10800	10530	e9520	ed9690	10000	7310	e7570
<u>Carquinez Strait</u>								
Martinez	7200	7170	a5780	e7650	7320	7930	a3780	e6400
<u>Suisun Bay</u>								
Port Chicago	5160	6810	3380	e4970		ed3260	2920	e3820
Middle Point	1570			e4360	4970	4120	4360	a2930
Pittsburg	a200	a270				a386	a317	a211
<u>Sacramento River</u>								
Collinsville	a183				a228	a465	a228	a158
Emmerton	a22	a37	a69	a35	a43	90	a37	abd28
Threemile Slough Bridge	a11	20	a13	a17	a21	18	a13	a1c
Rio Vista Bridge	8	9	9	10	11	10	8	8
Isleton Bridge	7	8	8	7	d8	7	8	
<u>San Joaquin River</u>								
Antioch	a41	a132	200	a103	a122	233	a118	a55
Antioch Bridge*	62	152	135	175	205	200	150	13c
Jersey Island	a16	32		a17	a25	a33	bd17	a21
Threemile Slough	a12	a11	abd13	a11	a15	a14	a12	a12
False River	a14	16	d17	ed13	a18	20	a14	a16
San Andreas Landing	a10	a10	10	9	a9	a10	a10	a1c
Dutch Slough	a19	19	a19	a19	22	24	26	a25
Mossdale Bridge	104	110	a104	d103	103	103	a105	96

a Taken after Low High Tide
c Taken two days later
e Taken on preceding day

b Taken on following day
d Taken over one hour off scheduled time
f Taken two days earlier
* Chloride values computed from
conductivity recorder readings

DEPARTMENT OF WATER RESOURCES

SACRAMENTO DISTRICT

325. STREET

P.O. BOX 9137

SACRAMENTO 95816



October 9, 1967

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the Period September 2 to September 30, 1967, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	9/2	9/6	9/10	9/14	9/18	9/22	9/26	9/30
<u>San Pablo Bay</u>								
Crockett		10400	9410	e9100	9020		7730	8850
<u>Carquinez Strait</u>								
Martinez	a6550	6600	a4920	6780	a4870	7580		7950
<u>Suisun Bay</u>								
Port Chicago	5480	2910	4570	3260	2350		2270	3180
Middle Point	4870	2860	3530	2180	1440	2520	d1180	
Pittsburg	a248	bd233	a179	abd132	a75	83	59	a65
<u>Sacramento River</u>								
Collinsville	a195	a246	a49	a28	a26	a28	a30	a24
Emmaton	abd20	34	a38	a20	18	abd20	a19	a15
Threemile Slough Bridge	a14	a11	a12	a9	9	a11	a8	a10
Rio Vista Bridge	6	8	8	8	8	10	7	7
Isleton Bridge	2	8	7	8	8	7	5	5
<u>San Joaquin River</u>								
Antioch	172	115	a45	a54	a43	42	a25	a34
Antioch Bridge*	147	93	125	84	56	48	37	42
Jersey Island	a16	a24	a14	a16	20	18	a13	a20
Threemile Slough	a11	9	a10	a10	ad11	a11		a11
False River	a13	d12	a12		a12			a12
San Andreas Landing	a8	9	9	a10	10	11	12	a11
Dutch Slough	a22	ad20	a17	a16	16	16	a16	a17
Mossdale Bridge	95	a99		103	98	a94	a93	96

a Taken after Low High Tide

c Taken two days later

e Taken on preceding day

b Taken on following day

d Taken over one hour off scheduled time

f Taken two days earlier

* Chloride values computed from
conductivity recorder readings

DEPARTMENT OF WATER RESOURCES

SACRAMENTO DISTRICT
371 F STREET
P.O. BOX 9137
SACRAMENTO 95816



December 8, 1967

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the Period November 2 to November 30, 1967, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	11/2	11/6	11/10	11/14	11/18	11/22	11/26	11/30
<u>San Pablo Bay</u>								
Crockett		8800	6810			9100	10000	11700
<u>Carquinez Strait</u>								
Martinez	a5200	7250	6060	a4180		5270	5990	8360
<u>Suisun Bay</u>								
Port Chicago	3880	3700	1460		3580	3160	ed4690	6750
Middle Point	3600					1550	4010	
Pittsburg	84	a100	abd96	d87	157	129	96	19
<u>Sacramento River</u>								
Collinsville	93	a31	30		220	a40	16	
Emmaton	18	16	19	18	26	a20	15	29
Threemile Slough Bridge	9	a11	10	10	a10	a12	13	19
Rio Vista Bridge	7	10	7	8	8	10	11	16
Isleton Bridge	4	5	4	7	6	6	9	
<u>San Joaquin River</u>								
Antioch	63	59	d24	47	76	a52	56	114
Antioch Bridge*	Station discontinued as of 10/26/67							
Jersey Island	a17	a18	24	25	25	bd22	27	a22
Threemile Slough	13	a14	16		16	16		23
False River	14	a16	18	19	55	a21	20	24
San Andreas Landing	14	16	15	16	a17	18	18	18
Dutch Slough	22	26	33	40	34	36	36	34
Mossdale Bridge	a49	a60		a54	a62	a62	ab52	a46

a Taken after Low High Tide
c Taken two days later
e Taken on preceding day

b Taken on following day
d Taken over one hour off scheduled time
f Taken two days earlier
* Chloride values computed from conductivity recorder readings

DEPARTMENT OF WATER RESOURCES

SACRAMENTO DISTRICT
3251 S STREET
P.O. BOX 9137
SACRAMENTO 95816



November 10, 1967

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the Period October 2 to October 30, 1967, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	10/2	10/6	10/10	10/14	10/18	10/22	10/26	10/30
<u>San Pablo Bay</u>								
Crockett	8830	9640	8170	9800		9170		8400
<u>Carquinez Strait</u>								
Martinez		a4400	4720	4640	a5130	5590	6080	
<u>Suisun Bay</u>								
Port Chicago	1050		2150	1700		3790	2210	2860
Middle Point	a1290		a1310	1680	3040	2810	1820	2360
Pittsburg	ade75	83		49	60	86		37
<u>Sacramento River</u>								
Collinsville	a26		a23	27	24	ad29		20
Emmaton	a17	19	a20	cd9	15	15	a14	13
Threemile Slough Bridge	a10	a10	a9	3	a8	a8	a8	18
Rio Vista Bridge	7	8	6	7	5	5	6	5
Isleton Bridge	7	6	4	6	4	5	5	5
<u>San Joaquin River</u>								
Antioch	40	a38	a32	31	a31	a29	a25	28
Antioch Bridge*	41	34	28	22	26	24	21	
Jersey Island	abd14	15	a15	13	16	a14	abd16	16
Threemile Slough	a11	a11		11	a12		a12	14
False River	a13	a11	ad12	12	13	a12	a14	13
San Andreas Landing	a10	a12	a13	12	11	12	a13	16
Dutch Slough	a18	21	a20	20	20	20	a22	23
Mossdale Bridge	78	a78	a90	a94	a99	a46	a47	a46

a Taken after Low High Tide
c Taken two days later
e Taken on preceding day

b Taken on following day
d Taken over one hour off scheduled time
f Taken two days earlier
* Chloride values computed from conductivity recorder readings

DEPARTMENT OF WATER RESOURCES

SACR 470 DISTRICT
327 STREET
P.O. BOX 9127
SACRAMENTO 95816



January 10, 1968

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the Period December 2 to December 30, 1967, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	12/2	12/6	12/10	12/14	12/18	12/22	12/26	12/30
<u>San Pablo Bay</u>								
Crockett	10100	7710	6920	7330	11400		9460	10300
<u>Carquinez Strait</u>								
Martinez	a5270	a6220	ae3180	2260	a7960	a5220	ae5630	8310
<u>Suisun Bay</u>								
Port Chicago	4240	2610			6190	2180	5030	
Middle Point	d4310	2230		1390	5320			5070
Pittsburg	170		49	36	336		59	172
<u>Sacramento River</u>								
Collinsville	340	a42	25	49	a74	bd18	100	191
Emmaton	24	a30	12	10	28		13	17
Threemile Slough Bridge	a15	a14	11	20	a13	a15		
Rio Vista Bridge	11	8	11	9	9	8	7	9
Isleton Bridge	6	5	6	6	6	4	5	5
<u>San Joaquin River</u>								
Antioch	140	d72	38	27	160	a38	58	136
Jersey Island	29	abd30	bd24	26	a22	a30	24	a23
Threemile Slough	a18	a18		12	a23		18	17
False River	33		25	d23	24	a25	d23	23
San Andreas Landing	20	17	14	10	18	20		10
Dutch Slough	38	41	46	36	32	38	38	35
Mossdale Bridge	a47	a51	58	a50	a56	a64	64	a65

a Taken after Low High Tide
c Taken two days later
e Taken on preceding day

b Taken on following day
d Taken over one hour off scheduled time
f Taken two days earlier

DEPARTMENT OF WATER RESOURCES

SACRAMENTO DISTRICT
 3251 S STREET
 P.O. BOX 9127
 SACRAMENTO 95816



February 9, 1968

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
 For the Period January 2 to January 30, 1968, inclusive.

Salinity in parts of chloride per million parts of water.
 Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
 (Ocean water contains approximately 18,200 parts)

Station	1/2	1/6	1/10	1/14	1/18	1/22	1/26	1/30
<u>San Pablo Bay</u>								
Crockett	Broken	7660		8860	6460	7180	8860	8520
<u>Carquinez Strait</u>								
Martinez	ad4860	d2510	a7690	7920		5240	7060	a4880
<u>Suisun Bay</u>								
Port Chicago		2770	9340	4590	1640	3830		
Middle Point	862	2540	7850	4090	1100	1590	4310	2590
Pittsburg		80	d718	bd179		36	68	132
<u>Sacramento River</u>								
Collinsville	a68	40	142	295		20	86	a21
Emmaton	a18	14	20	bd24	abd11	bd8	20	13
Threemile Slough Bridge		11	Broken	Broken	a9	8	15	a14
Rio Vista Bridge	10	9	8	10	6	6	8	8
Isleton Bridge	4	5	4	3	4	3	8	6
<u>San Joaquin River</u>								
Antioch	80	43	431	109	47	32	32	69
Jersey Island	a29	bd22	bd28	a27	a27	bd27	31	a43
Threemile Slough	a18	16	Broken	21	a24	19		24
False River	a21	21	d64	25	a25	24	26	25
San Andreas Landing	18	18	16	21	22	10	22	23
Dutch Slough	37	42	36	46	48	54	43	45
Mossdale Bridge	a67	61	a71	a81	a105	102	a115	a116

a Taken after Low High Tide
 c Taken two days later
 e Taken on preceding day

b Taken on following day
 d Taken over one hour off scheduled time
 f Taken two days earlier

DEPARTMENT OF WATER RESOURCES

SACRAMENTO DISTRICT
 3351 S STREET
 P.O. BOX 9137
 SACRAMENTO 95816



March 8, 1968

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
 For the Period February 2 to February 26, 1968, inclusive.

Salinity in parts of chloride per million parts of water.
 Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
 (Ocean water contains approximately 18,200 parts)

Station	2/2	2/6	2/10	2/14	2/18	2/22	2/26
<u>San Pablo Bay</u>							
Crockett	4790	6100	7660	7400	7110	4410	3430
<u>Carquinez Strait</u>							
Martinez	2010	2870	2390	5650	a2850	ae670	a190
<u>Suisun Bay</u>							
Port Chicago	431	302	1630	1770	1050		
Middle Point	148	1960	2350		785	48	20
Pittsburg	a38		28	32	35		
<u>Sacramento River</u>							
Collinsville	16	17	17	18		14	9
Emmaton	13	9	12	18	14	12	7
Threemile Slough Bridge	6	10	11	12	14	8	6
Rio Vista Bridge							
Isleton Bridge	2	5	5	6	7	3	4
<u>San Joaquin River</u>							
Antioch	38	31	25	34	36	34	27
Jersey Island	35	bd34	32	a30	30	bd32	25
Threemile Slough	30	27	24	25			20
False River	a26	26	28	a30	27	a25	a24
San Andreas Landing	20	13	26	23	24	13	17
Dutch Slough	56	64	61	56	57	62	61
Mossdale Bridge	113	119	a78				

a Taken after Low High Tide
 c Taken two days later
 e Taken on preceding day

b Taken on following day
 d Taken over one hour off scheduled time
 f Taken two days earlier

DEPARTMENT OF WATER RESOURCES

SACRAMENTO DISTRICT
 1111 S STREET
 P.O. BOX 9187
 SACRAMENTO 95816



April 5, 1968

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
 For the Period March 2 to March 30, 1968, inclusive.

Salinity in parts of chloride per million parts of water.
 Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
 (Ocean water contains approximately 18,200 parts)

Station	3/2	3/6	3/10	3/14	3/18	3/22	3/26	3/31
<u>San Pablo Bay</u>								
Crockett	2880	1820	4500	6350	ad4310	5760		
<u>Carquinez Strait</u>								
Martinez	610	274	1860	3580	a147	2450	a980	458
<u>Suisun Bay</u>								
Port Chicago	202		174		98			176
Middle Point	16	12	87	444	50	35	116	109
Pittsburg	22		20		20	d22	17	a2
<u>Sacramento River</u>								
Collinsville	8	8		16	13	16	12	a3
Ematon	5	8	bd8	7	10	7	11	d1
Threemile Slough Bridge	5	4	8	8	8	11	10	
Rio Vista Bridge			5	7	11	8	10	
Isleton Bridge	2	3	5	8	3	4	7	
<u>San Joaquin River</u>								
Antioch	a28	24	21	24	25	18	24	e
Jersey Island	25	bd26	24	ad23	21	20	a20	a1
Threemile Slough	18			14	14	14	17	1
False River	22	20	20	a16	17		17	1
San Andreas Landing	16	14	13	13	a12	16	16	1
Dutch Slough	62	39	56	51	43	39	32	1
Hosedale Bridge		69	a74	a70	74	60	a80	10

a Taken after Low High Tide
 c Taken two days later
 e Taken on preceding day

b Taken on following day
 d Taken over one hour off scheduled time
 f Taken two days earlier

DEPARTMENT OF WATER RESOURCES



SACRAMENTO DISTRICT
3251 S STREET
P.O. BOX 9137
SACRAMENTO 95816

May 10, 1968

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the Period April 2 to April 30, 1968, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	4/2	4/6	4/10	4/14	4/18	4/22	4/26	4/30
<u>San Pablo Bay</u>								
Crockett		5900	9920	11500	9250	9920		11500
<u>Carquinez Strait</u>								
Martinez	a2750	ae4900	8000	a5000	9050	a6550	8180	9920
<u>Suisun Bay</u>								
Port Chicago	ad1950	1120	3750	5100		4200		
Middle Point		610	3820	4650	4220	3300		6520
Pittsburg	a23	23	bd50	a187	d204			
<u>Sacramento River</u>								
Collinsville	18	20	20		525	a331		1360
Emmaton	bd12	14	16	37	67	a47	a89	300
Threemile Slough Bridge	10	12	11	a15	21	a18	a18	72
Rio Vista Bridge	6	8	10	11	10	9	12	12
Isleton Bridge	8	8	9	6	9	6	8	ed8
<u>San Joaquin River</u>								
Antioch	26	20	68	ad153	191	a158	a180	544
Antioch Bridge		21	24	47	136	95	187	762
Jersey Island	24		24					
Threemile Slough	16	14	15	a13	17	a16	a18	34
False River	18	18	17	a17	25	ad18	a38	112
San Andreas Landing	11	15	13	a10	9	a8	a10	13
Dutch Slough	30	30	27	26	20	a25	27	35
Mossdale Bridge	88	90	a138	190	204	182	168	163

a Taken after Low High Tide
c Taken two days later
e Taken on preceding day

b Taken on following day
d Taken over one hour off scheduled time
f Taken two days earlier

DEPARTMENT OF WATER RESOURCES

SACRAMENTO DISTRICT
3121 S STREET
P.O. BOX 9137
SACRAMENTO 95814



June 10, 1968

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the Period May 2 to May 30, 1968 inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	5/2	5/6	5/10	5/14	5/18	5/22	5/26	5/30
<u>San Pablo Bay</u>								
Crockett	11200						12000	11500
<u>Carquinez Strait</u>								
Martinez	a6790	a7830	10400	a6920	ed9100	9220	9000	10500
<u>Suisun Bay</u>								
Port Chicago	7050			ed9190	5440		7120	7250
Middle Point	6420	ad4910	7100		4540	2140	5980	4030
Pittsburg			a894		971		a750	
<u>Sacramento River</u>								
Collinsville	1540	a940		1630	1700*	1425*	1750*	1800*
Ematon	368	a161	a104	245	154	a68	a66	258
Threemile Slough Bridge	64	a41	a36	110	a63	a35	56	80
Rio Vista Bridge	16	14	8	28	15	11	16	26
Isleton Bridge	9	8	10	11	9	10	12	12
<u>San Joaquin River</u>								
Antioch	729	397	a426	1100	603	a371	603	672
Antioch Bridge	440	272	396	679	333	314	305	437
Jersey Island								
Threemile Slough	39	a48	a31	53	63	34	ad34	56
False River	95	a54	a61	d194	98	a68	bd150	148
San Andreas Landing	d12	a7	a14	19	18	a14	ad15	24
Dutch Slough	44	a48	a57	68	60	a63	75	79
Mossdale Bridge	183	a172	178	174	168	162	178	195

a Taken after Low High Tide
c Taken two days later
e Taken on preceding day

b Taken on following day
d Taken over one hour off scheduled time
f Taken two days earlier
* Values from chloride recorder

DEPARTMENT OF WATER RESOURCES

SACRAMENTO DISTRICT
325 STREET
P.O. BOX 9137
SACRAMENTO 95815



July 10, 1968

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the Period June 2 to June 30, 1968 inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	6/2	6/6	6/10	6/14	6/18	6/22	6/26	6/30
<u>San Pablo Bay</u>								
Crockett	10200	e12900	13500	12600	e13100	12600	14000	11500
<u>Carquinez Strait</u>								
Martinez	8250	8470	a9170	10200	e9120	a8740	a10400	9930
<u>Suisun Bay</u>								
Port Chicago	4950			8010	e7180	7480	10400	7810
Middle Point	4850	6530	8830	7090	e6500	7520	a6260	7060
Pittsburg	1080		d1800			a1110	a1750	1790
<u>Sacramento River</u>								
Collinsville			a1440	d1700	a1630	a1710	ad2220	
Emmaton		a139	a232	325	a408	a291	a628	507
Threemile Slough Bridge	71	a58	a115	203	a84	94	448	231
Rio Vista Bridge	13	27	12	30	42	22	78	8
Isleton Bridge	11	10	11	12	14	7	14	6
<u>San Joaquin River</u>								
Antioch	598	a432	a658	1260	a769	a774	d2120	1500
Antioch Bridge	340	d257	871	798	614	733	1320	1010
Jersey Island								
Threemile Slough	66	a46	a80	108	a93	55	190	159
False River	bd75	bd53	285	252	bd112	d174	483	334
San Andreas Landing	10	a13	a18	29	a13	a34	71	a34
Dutch Slough	73	a73	87	92	a107	a158	237	227
Mossdale Bridge	246	225	210	199	194	230	191	219

a Taken after Low High Tide
c Taken two days later
e Taken on preceding day

b Taken on following day
d Taken over one hour off scheduled time
f Taken two days earlier

DEPARTMENT OF WATER RESOURCES

SACRAMENTO DISTRICT
3331 S STREET
P.O. BOX 9137
SACRAMENTO 95815



August 9, 1968

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the Period July 2 to July 30, 1968, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	7/2	7/6	7/10	7/14	7/18	7/22	7/26	7/30
<u>San Pablo Bay</u>								
Crockett	13600		14600	12800	e14800	13300		
<u>Carquinez Strait</u>								
Martinez	a10400	e11800	12600	10700	a8180	12500	13600	8320
<u>Suisun Bay</u>								
Port Chicago	8180	9590	10600	8230	e8540	10300	a6820	7620
Nichols	7280	9370	9590	7350	e7640	9420	9730	8200
Pittsburg		a2340		a2820		a2730		
<u>Sacramento River</u>								
Collinsville	a2420	a2600	a2510	a2630		a2740	bd3820	2720
Ematon	a956	a660	1220	a752	a316	a662	1540	a990
Threemile Slough Bridge	a212	a327	660	a252	a146	a282	539	a290
Rio Vista Bridge				109	71	126	198	139
Isleton Bridge	ed8		12	9	8	8	13	8
<u>San Joaquin River</u>								
Antioch	a1450	a1170	a1210	a2070	1960	a1420	2730	1600
Antioch Bridge				1210	1350	1430	2020	bd1260
Jersey Island			bd1010	362	a298	bd1210	1140	548
Threemile Slough	a177	a211	a205	a291				
False River	ad171	bd898	762	a478	a233	bd562	750	a382
San Andreas Landing	a34	a75	164	a38	a34	a52	a60	a68
Dutch Slough	a209	a211	342	291	a263	a316	a335	379
Mossdale Bridge	a224	236	212	a210	207	233	232	a204

a Taken after Low High Tide
c Taken two days later
e Taken on preceding day

b Taken on following day
d Taken over one hour off scheduled time
f Taken two days earlier

DEPARTMENT OF WATER RESOURCES

SACRAMENTO DISTRICT
3231 S STREET
P.O. BOX 9137
SACRAMENTO 95816



September 6, 1968

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the Period August 2 to August 30, 1968, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	: 8/2 :	8/6 :	8/10 :	8/14 :	8/18 :	8/22 :	8/26 :	8/30
<u>San Pablo Bay</u>								
Crockett					13600	e13100		12400 13600
<u>Carquinez Strait</u>								
Martinez	e11100	11200	a10500	a8620	e9930	a8570	9610	10200
<u>Suisun Bay</u>								
Port Chicago	e9250	bd10700	9420	8490		a5390	6160	8960
Nichols			8470	7860	e7620	7480	5990	8280
Pittsburg		a1890	a2230		a1610	abd1350		a1130
<u>Sacramento River</u>								
Collinsville	a2130	2110			ad1670	a1560	1650	a1100
Emmaton	a495	a578	1200	a388		a347	261	a176
Threemile Slough Bridge	a180	a259	375	a205	a134	ad148	81	a82
Rio Vista Bridge	e100	13	121	61	45	52	55	58
Isleton Bridge	a8	8	9	9	10	9	10	13
<u>San Joaquin River</u>								
Antioch	e1400	a1210	1940	a1080	a1080	1530	1050	a728
Antioch Bridge*	bd2320		1460	1160	291	784	728	1020
Jersey Island	e680	bd1040	641	388			362	
Threemile Slough	a239	a189	257	a163	a155	a134	a95	
False River	a262	a312	d390	ad202	ad219	a203	224	a154
San Andreas Landing	a46	a51	103	a41	a43	a35	32	a16
Dutch Slough	a345	a324	363	409	a270	a230	209	a194
Mossdale Bridge	a195	197	201	a213	ad207	163	158	a153

a Taken after Low High Tide
c Taken two days later
e Taken on preceding day

b Taken on following day
d Taken over one hour off scheduled time
f Taken two days earlier
* Chloride values computed from conductivity recorder readings

DEPARTMENT OF WATER RESOURCES

CENTRAL DISTRICT
3151 S STREET
P.O. BOX 9137
SACRAMENTO 95816



October 9, 1968

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the Period September 1 to September 30, 1968, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	9/2	9/6	9/10	9/14	9/18	9/22	9/26	9/30
<u>San Pablo Bay</u>								
Crockett		13600	12900	11300	11300	13000		d11100
<u>Carquinez Strait</u>								
Martinez	a8930	11200	9940	a7810	a8790	8650	ade8060	e12500
<u>Suisun Bay</u>								
Port Chicago	e9220	8400	6540	7370	b8280	a4750	8080	e8650
Nichols	e7090	a3110	5980	5520		4640	7780	7620
Pittsburg	a1360	a1270	b1080	a874	a969	a762		a1190
<u>Sacramento River</u>								
Collinsville	bdal250	a1710	1650	a928	ad1250	a1040	1650	d1630
Ernstson		739		a50	ab97	a63	a131	a138
Threemile Slough Bridge	a186	158	a73	a49	a47	a41	a64	a89
Rio Vista Bridge	49	68	25	21	23	25	30	e30
Isleton Bridge	17	11	12	12	12	5.8	11	9
<u>San Joaquin River</u>								
Antioch	a631	1090	a627	a413	a571	a472	a603	a526
Antioch Bridge	243	806	540	540	298	397	608	e950
Jersey Island		b268						
Threemile Slough		a82	a66		a66		a57	a70
False River	a184	180	a117	a93	ad93	a105	a78	a113
San Andreas Landing	a26	a28	ad20	a24	a21	a19	27	a23
Dutch Slough	a199	205	156	b140	a118	110	110	147
Mossdale Bridge	186	177	a170	a161	165	163	a150	a153

a Taken after Low High Tide
c Taken two days later
e Taken on preceding day

b Taken on following day
d Taken over one hour off scheduled time
f Taken two days earlier

DEPARTMENT OF WATER RESOURCES

CENTRAL DISTRICT

3251 S STREET

P.O. BOX 9187

SACRAMENTO 95816



November 8, 1968

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the Period October 2 to October 30, 1968, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	10/2	10/6	10/10	10/14	10/18	10/22	10/26	10/30
<u>San Pablo Bay</u>								
Crockett	e13200	12500		11700		13200	13000	a11400
<u>Carquinez Strait</u>								
Martinez	11100	7850	6290	10400	9680	9550	11700	8520
<u>Suisun Bay</u>								
Port Chicago	8080	5880	8100	7570		af7520		6720
Nichols	6960	6470	7540	7080	6540		7960	
Pittsburg		1160	1640		6850	a1430	1460	1460
<u>Sacramento River</u>								
Collinsville	a1450	1280	d2030	a1630		1960	a1150	1810
Emmaton	a211	305	a343	a375	b359	569	a198	227
Threemile Slough Bridge	a98	a58	a138	a121				143
Rio Vista Bridge	11	28	10	11	30	34	26	38
Isleton Bridge	8	7		5	7	7	6	d6
<u>San Joaquin River</u>								
Antioch	a629	888	1300	a1220	1000	1240	1580	978
Antioch Bridge	747		903	860	731	865	1120	575
Jersey Island				a284		446	495	226
Threemile Slough	a75	62	a96	a92	85	85	a38	80
False River	a125	a115	a212	ad101	d145	137	158	191
San Andreas Landing	a18	16	28	a27	26	d20	23	14
Dutch Slough	a127	131	124	e116	116	125	120	122
Mossdale Bridge	167	a150	a168	a116	a90	a144	a96	86

a Taken after Low High Tide
c Taken two days later
e Taken on preceding day

b Taken on following day
d Taken over one hour off scheduled time
f Taken two days earlier

DEPARTMENT OF WATER RESOURCES

CENTRAL DISTRICT
3251 S STREET
P.O. BOX 9137
SACRAMENTO 95316



December 6, 1968

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the Period November 2 to November 30, 1968, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted,
(Ocean water contains approximately 18,200 parts)

Station	11/2	11/6	11/10	11/14	11/18	11/22	11/26	11/30
<u>San Pablo Bay</u>								
Crockett	12700	11600	10400	10200	12100	11900	9740	
<u>Carquinez Strait</u>								
Martinez	a8500	8300	7910	8720	a10100	a6810	a6350	a10900
<u>Suisun Bay</u>								
Port Chicago	6290		5420		6880	6690	a4440	
Nichols	6880	4800	6490		6490	6180		4860
Pittsburg	1290		1020		942	874		450
<u>Sacramento River</u>								
Collinsville	1470	1410	a825		1120	a449	532	d660
Emmaton	279	385	ab72	44	204	132	ad50	80
Threemile Slough Bridge	114	102	a66		30	a50		20
Rio Vista Bridge		40	10		15	26	12	10
Isleton Bridge	6	6	6	7	5	7	7	10
<u>San Joaquin River</u>								
Antioch	1090	870	908	378	697	c831	231	330
Antioch Bridge	649	698	508	232	340	517		200
Jersey Island			d273	117		231	56	80
Threemile Slough	66	a40		31	34	a26	20	20
False River	131	157	a81	96	53	da38	42	60
San Andreas Landing	16	19	d17	12	14	14	a10	10
Dutch Slough	117	106	97	d87	84	68	54	50
Mossdale Bridge	a88	a80	a103	157	a132	a151	162	a160

a Taken after Low High Tide
c Taken two days later
e Taken on preceding day

b Taken on following day
d Taken over one hour off scheduled time
f Taken two days earlier

DEPARTMENT OF WATER RESOURCES

CENTRAL DISTRICT
3251 S STREET
P.O. BOX 9137
SACRAMENTO 95816



January 8, 1969

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the Period December 2 to December 30, 1968, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	12/2	12/6	12/10	12/14	12/18	12/22	12/26	12/30
<u>San Pablo Bay</u>								
Crockett		10600	ad11000	d10000		7540	8910	6400
<u>Cerquinez Strait</u>								
Martinez	a6490	a7130	a8540	a5220	a3930	a3200	3000	a2800
<u>Suisun Bay</u>								
Port Chicago		ab3960			3340	2490		ab000
Nichols	4710	5860	7230	5150		894	1150	
Pittsburg			ad1260		d277	79	114	
<u>Sacramento River</u>								
Collinsville			a340	68	113	a14		
Ematon	88	102	a118	24	18	12	19	
Threemile Slough Bridge	21	a26	ae25	11	7	a10	11	
Rio Vista Bridge	10	8	11	7	6	12	11	
Isleton Bridge	5	6	8	3	6	9	10	
<u>San Joaquin River</u>								
Antioch	305	430	ad734	182	85	54	65	
Antioch Bridge	213	137	236	109	64	37	37	
Jersey Island	63							
Threemile Slough	29	b21	a16	14	11	a13	14	
False River	34	30	ad31	24	18	a14	18	d
San Andreas Landing	ad10	11	ad12	9	10	12	14	
Dutch Slough	43	d39	35	32	29	26	26	
Mossdale Bridge	a119	a113	a86	84	a79	a73	46	a

a Taken after Low High Tide
c Taken two days later
e Taken on preceding day

b Taken on following day
d Taken over one hour off scheduled time
f Taken two days earlier

DEPARTMENT OF WATER RESOURCES

CENTRAL DISTRICT
 2121 S STREET
 P.O. BOX 9137
 SACRAMENTO 95816



February 7, 1969

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
 For the Period January 2 to January 30, 1969, inclusive.

Salinity in parts of chloride per million parts of water.
 Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
 (Ocean water contains approximately 18,200 parts)

Station	1/2	1/6	1/10	1/14	1/18	1/22	1/26	1/30
<u>San Pablo Bay</u>								
Crockett		6840	7080	7180	4050		119	11
<u>Carquinez Strait</u>								
Martinez	A1700		5440	6910	1940	a34	16	2
<u>Suisun Bay</u>								
Port Chicago			2500		a51	33	e17	
Nichols	527	954		3940	59	20	10	
Pittsburg				148	28		24	
<u>Sacramento River</u>								
Collinsville		a13	15		a10	10	6	
Ematon	a9	a11	14	16	9			
Threemile Slough Bridge		a9	10	13	a10			
Rio Vista Bridge	d7	10	11	12	6	11	5	
Isleton Bridge	4	9	9	7	2	3	2	
<u>San Joaquin River</u>								
Antioch	21	20	24	56	21		21	2
Antioch Bridge		20	22	45	18	17	15	
Jersey Island		23		33	20	22	10	
Threemile Slough	8	13	14	18				
False River	a14	a16	18	19	20	20	27	a:
San Andreas Landing	14	17	16	15	a14	a5	6	
Dutch Slough	30	26	31	36	35	a45	56	2
Mossdale Bridge	ad48	a76	72	a67	a40	14	13	a:

a Taken after Low High Tide
 c Taken two days later
 e Taken on preceding day

b Taken on following day
 d Taken over one hour off scheduled time
 f Taken two days earlier

DEPARTMENT OF WATER RESOURCES

CENTRAL DISTRICT
3251 S STREET
P.O. BOX 9137
SACRAMENTO 95816



March 7, 1969

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the Period February 2 to February 26, 1969, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	2/2	2/6	2/10	2/14	2/18	2/22	2/26
<u>San Pablo Bay</u>							
Crockett	87	1980	1320	1420	38		195
<u>Carquinez Strait</u>							
Martinez	27	a17	1120	732	24	23	18
<u>Suisun Bay</u>							
Port Chicago	27	a27	27	28	25	26	
Nichols	34	20	21		17	24	
Pittsburg	20		23	27	25	29	bd28
<u>Sacramento River</u>							
Collinsville	8	9	14	12	10	10	13
Emmaton							
Threemile Slough Bridge							
Rio Vista Bridge	5	6	11	5	4	7	10
Isleton Bridge	3	4	4	3	3	4	5
<u>San Joaquin River</u>							
Antioch	22	17	22	26	28	25	29
Antioch Bridge	11		20			20	
Jersey Island				26			24
Threemile Slough							
False River	a15	17	20	23	a21	24	27
San Andreas Landing	10	a10	7	6	15	10	7
Dutch Slough	28	38	41	39	38	40	38
Mossdale Bridge	a18	21	19	a22	a23	21	20

a Taken after Low High Tide
c Taken two days later
e Taken on preceding day

b Taken on following day
d Taken over one hour off scheduled time
f Taken two days earlier

DEPARTMENT OF WATER RESOURCES

CENTRAL DISTRICT
 3151 S STREET
 P.O. BOX 9137
 SACRAMENTO 95816



Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
 For the Period March 2 to March 30, 1969, inclusive.

Salinity in parts of chloride per million parts of water.
 Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
 (Ocean water contains approximately 18,200 parts)

Station	3/2	3/6	3/10	3/14	3/18	3/22	3/26	3/30
<u>San Pablo Bay</u>								
Crockett	586		1970	4380			4100	5570
<u>Carquinez Strait</u>								
Martinez	25	a21		957	a233	1370	1020	2700
<u>Suisun Bay</u>								
Port Chicago	31	24	23		34	31	32	37
Nichols		24	22	22	27		26	
Pittsburg		abd27	25	23	d29	29	31	26
<u>Sacramento River</u>								
Collinsville		12	11	27	18	17	19	40
Emmaton								
Threemile Slough Bridge								
Rio Vista Bridge		6	8	8	11	7	7	d8
Isleton Bridge		5	8	8	6	7	8	7
<u>San Joaquin River</u>								
Antioch	21	a25	21	26	25	28	30	30
Antioch Bridge		19	19		a29		25	
Jersey Island						26	26	
Threemile Slough		a18	18				22	21
False River		20	20	d26	26	24	22	24
San Andreas Landing		a11	a8	b22	a21	21		
Dutch Slough		36	33	b37	37	39	34	32
Mossdale Bridge	a20	21	a25	a24	25	23	28	a24

a Taken after Low High Tide
 c Taken two days later
 e Taken on preceding day

b Taken on following day
 d Taken over one hour off scheduled time
 f Taken two days earlier

DEPARTMENT OF WATER RESOURCES

CENTRAL DISTRICT
3001 S STREET
BOX 5137
MANTO 53316



Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the Period April 2 to April 30, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	4/2	4/6	4/10	4/14	4/18	4/22	4/26	4/30
<u>San Pablo Bay</u>								
Crockett		3520		b2920	3450		b3600	5680
<u>Carquinez Strait</u>								
Martinez	ab860	1560	465	ab340	a222	a1840	b3350	a2820
<u>Suisun Bay</u>								
Port Chicago	b38	a22	25	b23	23	71	b1380	1010
Nichols		33	17	b19		15	b16	80
Pittsburg	cb26		21	b20	20		b17	
<u>Sacramento River</u>								
Collinsville	ab16	a14	10	ab13	11	12		11
Ematon			9	ab11	9	8	b8	a8
Threemile Slough Bridge			14	8			ab16	a7
Rio Vista Bridge	b6	4	5	b7	5	3	b7	4
Isleton Bridge	b4	3	6	b4	4	4	b3	4
<u>San Joaquin River</u>								
Antioch	27	24	20	b20	20	18	b20	a18
Antioch Bridge		22					b14	17
Jersey Island								a14
Threemile Slough	ab21			ab14	13	14	ab14	a13
False River	b23	b21	22	e19	16	18	18	16
San Andreas Landing			6	ab8	a9	5	b85	a11
Dutch Slough	b34	34	29	b29	26	26	b27	24
Mossdale Bridge	b20	22	a16	b18	10	19	b19	18

a Taken after Low High Tide
c Taken two days later
e Taken on preceding day

b Taken on following day
d Taken over one hour off scheduled time
f Taken two days earlier

DEPARTMENT OF WATER RESOURCES

CENTRAL DISTRICT
 5 STREET
 BOX 5137
 SACRAMENTO 95316



Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
 For the Period May 2 to May 30, inclusive.

Salinity in parts of chloride per million parts of water.
 Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
 (Ocean water contains approximately 18,200 parts)

Station	5/2	5/6	5/10	5/14	5/18	5/22	5/26	5/30
<u>San Pablo Bay</u>								
Crockett	e4780	4350	b5320	b4750	3820			
<u>Carquinez Strait</u>								
Martinez	e3460	3400	a2780	b912	1750	575	ab712	a495
<u>Suisun Bay</u>								
Port Chicago	e600	506	b637	a26	26	16	ab19	24
Nichols		448	b130	b22	15	14	b11	b14
Pittsburg	b17	18	a19	a20	19	cd14		
<u>Sacramento River</u>								
Collinsville		10	a11		a10	10	ab16	a10
Emmaton	e8	9	a12	ac8	8	8	ab8	a9
Threemile Slough Bridge	ae8		a8		8	7	ab10	a8
Rio Vista Bridge	e4	6	b6	b7	4	5	b5	b7
Isleton Bridge	e3	5	b4	b3	4	4	b5	b4
<u>San Joaquin River</u>								
Antioch	e17	16	a9	b19	15	16	ab16	a12
Antioch Bridge	b15	16	b17	b17			b10	d12
Jersey Island	ae16	18			15	12		a10
Threemile Slough		a13	a14	a8			abd10	ab10
False River	b15	16	d15	16	a13	13		d11
San Andreas Landing	ae9	12	a8	a12	a9		ab6	a8
Dutch Slough	ae27	25	a22	b26	23	16	ab16	b14
Mossdale Bridge	e19	18	b16	b12	10	10	d9	b9

a Taken after Low High Tide
 c Taken two days later
 e Taken on preceding day

b Taken on following day
 d Taken over one hour off scheduled time
 f Taken two days earlier

DEPARTMENT OF WATER RESOURCES

CENTRAL DISTRICT
3251 S STREET
1. BOX 9157
SACRAMENTO 95816



JUL 10 1969

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
For the Period June 2 to June 30 1969, inclusive.

Salinity in parts of chloride per million parts of water.
Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
(Ocean water contains approximately 18,200 parts)

Station	6/2	6/6	6/10	6/14	6/18	6/22	6/26	6/30
<u>San Pablo Bay</u>								
Crockett		4150	4620	3400	2520	e3480		6720
<u>Carquinez Strait</u>								
Martinez	900	1700	g545	g18				
<u>Suisun Bay</u>								
Port Chicago	226	eg28		106	23	e1440	2200	2830
Nichols	20	15						
Pittsburg		bd13		g13	g14	g13		g20
<u>Sacramento River</u>								
Collinsville	g8	g8	g8	g10	g10			
Emmaton	7	bd10	g11	g11	10	d10	g11	15
Threemile Slough Bridge	8	g10	g10	9	10	g11	g12	g12
Rio Vista Bridge	6	e6	7	8	8	8	5	9
Isleton Bridge	4	b6	6	7	7	6	6	7
<u>San Joaquin River</u>								
Antioch	7	g15	g16	g14	12	g15	g19	
Antioch Bridge		b11	12			11	13	
Jersey Island								
Threemile Slough	g10	dg10		g9	g10	bd12	g12	g10
False River	11	de9	g10	g10	11	g12	g13	
San Andreas Landing	g5	g6	g6	g7	g7	g7	g7	
Dutch Slough	12	g12	g13	13	14	g14	g14	15
Mossdale Bridge	9		7	11	11	12	12	19

a Taken after Low High Tide
c Taken two days later
e Taken on preceding day
g Taken after Low Low Tide

b Taken on following day
d Taken over one hour off scheduled time
f Taken two days earlier

DEPARTMENT OF WATER RESOURCES

CENTRAL DISTRICT
 1231 S STREET
 BOX 9107
 SACRAMENTO 95816



August 8, 1969

Salinity observations, Sacramento-San Joaquin Delta and Upper Bays
 For the Period July 2 to July 30, 1969, inclusive.

Salinity in parts of chloride per million parts of water.
 Samples taken 1-1/2 hours after High High Tide unless otherwise denoted.
 (Ocean water contains approximately 18,200 parts)

Station	7/2	7/6	7/10	7/14	7/18	7/22	7/26	7/30
<u>San Pablo Bay</u>								
Crockett			ad8420		9110	e9360	11300	12000
<u>Carquinez Strait</u>								
Martinez		a2440	<u>a3860</u>	6300	a887	e7820	ad7360	9060
<u>Suisun Bay</u>								
Port Chicago		d3400		3230	2680	e4040		
Nichols								
Pittsburg					a73	a114	a241	
<u>Sacramento River</u>								
Collinsville								
Ematon	bd15	d14	d15	24	d27	e45	a22	154
Threemile Slough Bridge		a21	a13	13	16	a12	a18	19
Rio Vista Bridge		e11		9	9	e9	9	
Isleton Bridge		6	5	6	7	e6	5	7
<u>San Joaquin River</u>								
Antioch		a21	a18		15		a48	238
Antioch Bridge		e17			32	e33		
Jersey Island		a14	a17	a18	19			
Threemile Slough	bd12	a13	a15	13	bd18	bd16	bd15	a14
False River	15	a12	a14	15	15	a15	a15	22
San Andreas Landing		a8	a12	a13		a9	a7	e6
Dutch Slough	18	18	a18	19	21	19	a22	20
Mossdale Bridge	28	a30	32	40	38	a62	77	86

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